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Climatological Data for August, 1910.
DISTRICT No. 1, NORTH ATLANTIC STATES.

WILFORD M. WILSON, District Editor.

GENERAL SUMMARY.

The principal features of the weather for August, 1910, were the prevalence of moderate temperature during almost the entire month with no marked periods of extreme heat, and a wide-spread deficiency in rainfall, prolonging, in many sections, the serious drought conditions that developed during the preceding month. The chief region thus affected includes an extensive area in southeastern New York and small parts of adjacent States, where the rainfall of both July and August approached the lowest of record for many years. In most parts of the district the weather was somewhat cooler than usual, and, as compared with that in recent years, the range in temperature was moderate. During the coolest period, which occurred between the 27th and 31st, light frosts were observed in some exposed localities as far south as New Jersey and Pennsylvania, but, so far as could be ascertained, there was no great damage, and freezing temperatures occurred only in very limited sections.

TEMPERATURE.

The average temperature for the district was nearly 68°, which is only about 1° below the normal. The deficiency was by no means uniform over the district, varying from an average of 1.7° in Virginia to 0.4° in New York, while the departures at individual stations ranged from −4.4° at Annapolis, Md., to +3.8° at Cortland, N. Y. The highest mean temperature reported in the district was 75.8° at Cambridge, Md., and the lowest, 57.0° at Lake Pleasant, N. Y.

The month opened with cool weather over most of the district, but this was followed by a rise in temperature that was quite rapid in the southern sections, as shown by the fact that at several stations in Maryland and Virginia the lowest temperature of the month was observed on the 1st and the highest about the 3d. Throughout Pennsylvania and that part of the district farther south, the chief warm period of the month occurred at this time, and the highest temperatures were generally observed on the 2d or 3d, while at most stations in the northern sections the warmest weather occurred on or about the 14th or 25th. It is worthy of note that the maximum temperatures of the month were, as a rule, lower than those usually observed in August. In New York, to illustrate, temperatures of 90° or above were observed at only 8 stations as compared with 30 in the same month last year. It is also true that the number of days with excessive heat was comparatively small.

Almost the entire month comprised successions of warmer and cooler periods of ordinary character varying in length from 3 to 8 days. With the exception of the rapid rise in temperature previously noted, between the 1st and 3d, there were none but gradual changes until after the culmination of the last warm period, about the 25th or 26th, when, closely following a strong barometric depression, an extensive high area advanced over the district covering that part of the country until the last day of the month. This condition produced the only cool period of importance, though, as compared with other years, the minimum temperatures at most stations were not unusually low. However, at Harrisburg, Pa., the minimum of 49° on the 27th was the lowest for August in the history (23 years) of the station. The lowest temperature reported in the district was 29° at Woodstock, Vt., on the 27th, while the record for August, 1909, shows a minimum of 20° at Indian Lake, N. Y. No damage from freezing was reported, though frosts were observed at some points in Maine, New Hampshire, Vermont, New York, Pennsylvania, and New Jersey.

PRECIPITATION.

The average precipitation for the district was about 2.89 inches, which is slightly less than the average for August, 1909. The rainfall of the month was generally below normal, and there was a deficiency of 2 inches or more over about one-third of the area of the district. The distribution was remarkably irregular as illustrated by the fact that the records of 38 stations show an excess of rainfall, as compared with the normal, while a deficiency appears for 143 stations. In parts of several different States the total precipitation was considerably less than 1 inch, while in many other localities it amounted to more than 6 inches, in some instances, even exceeding 9 inches. The heaviest rainfall in the district occurred over that part of Maryland lying between Chesapeake Bay and the Atlantic Ocean. At Princess Anne, Md., a total of 12.63 inches was recorded. The least rainfall appears to have occurred over the upper Potomac watershed in Virginia and West Virginia, the total for the month at Stephens City, Va., being 0.34 inch and that for Harpers Ferry, W. Va., 0.90 inch. At other stations in the region the precipitation was close to the lowest of record for August.

The most serious drought conditions, however, developed in central Maryland, southeastern New York, northeastern Pennsylvania, and northern New Jersey, owing to the great deficiency in rainfall in those regions in both July and August. These conditions have caused serious injury to pastures and greatly retarded the growth of some crops, while streams have reached unusually low stages.

The latter part of the month was especially dry, particularly after the 19th, when the rainfall was generally light and of much less frequent occurrence. In much of southeastern New York and in some adjacent sections of Massachusetts, Connecticut, and in New Jersey, there were no very effective rains later in the month than the 11th.

The first noteworthy storm that affected the district came on the 4th and caused heavy and some excessive rainfall north of the latitude of Massachusetts, but comparatively little farther south. This was attended by destructive winds and lightning, which caused damage in and near the upper Hudson Valley, amounting to many thousands of dollars. Several persons were killed by lightning and a number of others were injured. From the 8th to the 10th a storm moved northeastward along the coast region and heavy rains resulted over most of the district, except at some interior stations.

An exceptionally severe hailstorm occurred on the 11th in Prince Georges County, Md. According to reports by witnesses of the storm, the hailstones were unusually large and destructive. In some places corn, tobacco, sugar cane, tomatoes, and fruits were so damaged as to be practically worthless. Birds, chickens, and even pigs, are reported to have been killed by the hail. Ex-Sheriff Hurd is quoted as follows in press dispatches of August 11:

> The hailstorm last night was the worst I have ever seen in Maryland. Within a radius of 5 miles from my house it totally destroyed about 600 acres of corn, about 900,000 plants of tobacco, many acres of vegetables of all kinds, peaches, apples, and all other kinds of fruit. Tons of hail were lying in ditches adjacent to fields this morning as late as 11 o'clock.

At Princess Anne, Md., on the same date there occurred the extraordinary rainfall of 7.19 inches between 6:30 p. m. and 10:30 p. m.

No unusual phenomena occurred in connection with the storms that came later in the month. Showers occurred frequently from the 15th to the 19th, especially in the southern part of the district, those of the 18th and 19th being compara-

tively heavy at most stations. Moderate showers were quite general on the 26th; and on the 31st scattered showers covered most of New England and parts of some other States.

RIVER CONDITIONS.

Over the northern part of the district the rivers and streams remained at moderate stages during most of the month, the gage readings averaging from about 1 to 4 feet higher than in August of the last 2 or 3 years. Owing to heavy rains that fell over the slopes of the Adirondack region during much of the month, the streams of that section were relatively high from the 6th to the 22d. Throughout the rest of the district, however, the rivers remained considerably below their usual stages, being generally somewhat lower than in 1907 and 1908, when there was a remarkable deficiency in the rainfall. In New Jersey, and some parts of Maryland, however, there was a considerable swell in the streams from the 9th to the 12th, resulting from heavy rains that occurred near that time. As a rule, the lowest stages of streams in all parts of the district occurred at the last of the month.

SUNSHINE.

The average percentage of possible sunshine for the district was about 58, and varied from 47 over central Connecticut to 66 at most stations along the Atlantic coast. There was an average of 9 days with 80 per cent or more, and of 5 with 20 per cent or less. The total hours of sunshine for the month averaged 247 and ranged from 202 at Hartford, Conn., to 285 at Eastport, Me. As compared with July, the sunshine of August shows a decided falling off, the decrease amounting to 11 per cent.

MISCELLANEOUS.

An earthquake shock of unusual force was felt in southwestern New Hampshire on August 30 at 9:05 a. m. The following information regarding it was obtained from Mr. Frank Dewing, cooperative observer at Alstead Center, N. H.:

It was felt in this and adjoining towns, shaking dishes from shelves, rattling windows, and jarring the ground so that poultry ran to shelter. An iron bridge, some 70 feet long, across Cold River at Alstead village, was observed to shake and rattle as if a team were crossing. There was first a loud rumbling as though from the north, the house was jarred, and the noise continued for some 10 seconds, gradually passing southward and the noise diminishing. It has been 15 or 20 years since the last occurrence of the kind in this vicinity. A gentleman who has lived in California says it was an earthquake, such as he has experienced there.

TABLE 1.—*Climatological data for August, 1910. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																				
Bar Harbor	Hancock	20	24																	Wm. Miller.
Cornish	York	778	55	65.8	− 0.4	90	14	38	27	40	3.53	− 0.92	2.40	0.0	6	14	12	5	nw.	T. H. West.
Eastport	Washington	53	38	60.8	+ 1.1	82	13	47	31	26	1.44	− 1.82	0.80	0.0	6	12	10	9	s.	U. S. Weather Bureau.
Ellsworth	Hancock		0	63.4		83	14	39	31	40	4.08		2.00	0.0	9	12	6	13	s.	S. P. Sutton.
Fairfield	Somerset	90	25	65.4	− 2.0	84	13	43	27	32	4.46	+ 1.08	2.42	0.0	7	16	4	11	.....	Edward F. Parker.
Farmington	Franklin	450	13	63.5	− 1.2	85	25	38	30†	37	3.94	+ 0.26	1.66	0.0	8	16	9	6	s.	State Normal School.
Gardiner	Kennebec	163	18	65.8	− 2.6	87	14	42	27	36	4.53	+ 2.69	2.42	0.0	7	17	8	6	sw.	Samuel D. Soule.
Greenville	Piscataquis	1,000	6	61.6	.....	83	25	38	31	34	3.69	.....	1.04	0.0	14	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	8	63.8	.....	86	25	35	30	40	1.07	.....	0.42	0.0	6	27	2	2	nw.	Bangor & Aroostook R. R.
Lewiston	Androscoggin	185	36	67.2	+ 0.1	90	14	47	27†	34	4.81	+ 1.50	3.31	0.0	5	15	9	7	s.	Union Water Power Co.
Madison	Somerset	257	7	64.0	.....	99	26	39	27†	41	3.69	.....	2.12	0.0	9	20	4	7	s.	Wm. Jardine.
Millinocket	Penobscot	386	7	65.4	.....	87	13	37	31	38	2.39	.....	0.83	0.0	8	7	7	17	sw.	H. S. Ferguson.
North Bridgton	Cumberland	450	17	66.2	− 1.0	88	14†	46	27†	37	5.72	+ 2.85	3.28	0.0	6	7	20	4	sw.	G. E. Chadbourne.
Orono	Penobscot	129	41	65.0	− 0.5	85	14	36	30	39	3.72	+ 0.21	1.20	0.0	11	17	7	7	sw.	Agricultural Exp. Station.
Patten	...do	550	8	61.9[a]	.....	85	25	35	27	41	2.28	.....	0.61	0.0	8	15[d]	9[d]	3[d]	w.	Bangor & Aroostook R. R.
Portland	Cumberland	99	39	64.4	− 1.8	85	26	48	31	31	2.79	− 0.78	0.72	0.0	8	12	11	8	s.	U. S. Weather Bureau.
Presque Isle	Aroostook		0	63.2	.....	85	25	31	30	39	0.93	.....	0.33	0.0	6	15	10	6	s.	San Lorenzo Merriman.
Rumford Falls	Oxford	505	17	64.0	− 1.7	84	24†	42	30	33	3.51	+ 0.44	2.18	0.0	7	20	7	4	nw.	Chas. A. Mixer.
Winslow	Kennebec	90	15	64.6	.....	88	21	38	30	37	5.52	.....	3.25	0.0	9	13	13	5	w.	Hollingsw'th & Whitney Co.
New Hampshire.																				
Alstead Center	Cheshire	1,120	6	64.4	.....	82	14	44	27	32	2.29	.....	1.22	0.0	8	22	4	5	sw.	Frank Dewing.
Benton	Grafton		0	62.0	.....	81	13†	40	30	32	4.94	.....	2.00	0.0	10	16	14	1	nw.	N. H. State Sanatorium.
Bethlehem	...do	1 470	18	62.4	− 1.8	82	25	38	27†	33	5.72	+ 1.80	3.02	0.0	10	16	9	6	nw.	Benjamin Tucker.
Concord	Merrimack	350	50	65.6	− 1.0	87	14	42	27	36	1.40	− 2.25	0.73	0.0	9	10	14	7	se.	U. S. Weather Bureau.
Durham	Stafford	88	15	65.6	− 2.4	89	14†	38	27†	43	3.02	− 0.06	1.44	0.0	7	18	7	6	se.	Agricultural Exp. Station.
Franklin	Merrimack	440	11	65.7	.....	88	13†	41	27	40	4.34	.....	2.07	0.0	10	17	11	3	sw.	Dr. C. P. Webster.
Grafton	Grafton	863	24	62.7	− 2.0	85	14†	34	27	42	3.76	− 0.51	1.65	0.0	7	17	10	4	w.	Perley R. Kimball.
Hanover	...do	603	76	65.0	− 1.1	88	15	36	27	40	3.91	+ 0.52	2.94	0.0	5	3	16	12	s.	Dartmouth College.
Keene	Cheshire	506	25	65.4	− 0.8	87	25	36	27	44	1.41	− 2.77	0.78	0.0	5	15	11	5	se.	Samuel Wadsworth.
Nashua	Hillsboro	125	25																.....	Jackson Company.
Newton	Rockingham		22	63.7	− 3.3	85	14	36	27†	37	2.47	− 0.68	1.04	0.0	5	15	15	1	sw.	W. C. Gale.
Plymouth	Grafton	500	22	64.0	− 1.7	85	13	38	30	38	3.79	− 0.72	2.35	0.0	7	18	3	10	w.	Mrs. Hattie G. Trow.
Vermont.																				
Bloomfield	Essex		3	62.0	.....	83	13	35	30	38	3.72	.....	1.45	0.0	13	15	12	4	s.	Lyman Falls L. and P. Co.
Cavendish	Windsor	910	7	64.3	.....	89	14	36	27	44	3.68	.....	1.30	0.0	7	23[a]	2[a]	5[a]	w.	Miss M. A. Kingsbury.
Chelsea	Orange	830	15	61.6	− 2.3	84	14†	33	30	41	2.96	− 0.31	1.50	0.0	8	11	9	11	s.	W. F. Dewey.
Jacksonville	Windham	1,000	25	60.0	− 3.1	81	14	32	25†	44	2.00	− 2.66	1.00	0.0	4	29	1	1	nw.	Miss Martha French.
Manchester	Bennington	980	11	62.9	.....	81	25	37	27	31	3.37	.....	1.12	0.0	4	11	14	6	sw.	N. M. Canfield.
St. Johnsbury	Caledonia	711	17	64.8	+ 0.4	85	15†	37	30	38	4.53	+ 0.70	1.00	0.0	13	11	9	11	se.	Fairbanks Museum.
Woodstock	Windsor	700	18	63.0	− 2.3	85	15	29	27	41	4.12	+ 0.58	2.22	0.0	6	12	6	13	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	21	67.2	− 1.0	86	14	41	27	36	4.03	− 0.24	1.75	0.0	7	19	11	1	sw.	Agricultural Exp. Station.
Blue Hill	Norfolk	640	26	67.6	+ 0.2	85	14†	50	27	26	1.05	− 3.02	0.36	0.0	9	7	14	10	s.	Blue Hill Observatory.
Boston	Suffolk	124	40	68.8	− 0.1	88	14	54	31	24	0.98	− 3.05	0.43	0.0	7	8	8	15	sw.	U. S. Weather Bureau.
Chestnut Hill	...do	124	30	69.4	− 0.2	91	13	44	27†	33	1.18	− 3.10	0.50	0.0	6	23	0	8	.....	Metropolitan Water Board.
Clinton	Worcester	370	14	66.6	.....	82	25	46	26	31	4.07	.....	1.69	0.0	7	.....	.....	.....	.....	Do.
Concord	Middlesex	139	20	65.1	− 3.2	86	14†	39	31	37	2.22	− 1.90	0.67	0.0	9	11	13	7	s.	Fred. A. Tower.
Fall River	Bristol	200	44	68.7	− 1.5	82	3	52	31	21	3.66	− 0.47	0.95	0.0	10	12	17	2	sw.	C. V. S. Remington.
Fitchburg	Worcester	550	27	67.6	− 0.7	89	13	42	27	34	3.57	− 1.23	1.23	0.0	7	19	8	4	w.	Dr. A. P. Mason.
Framingham	Middlesex	160	30	67.5	− 1.3	87	25	41	31	35	2.26	− 1.81	1.08	0.0	7	.....	.....	.....	.....	Metropolitan Water Board.
Hyannis	Barnstable	31	19	67.2	− 4.1	79	13†	45	31	23	3.17	− 0.06	0.87	0.0	10	18	9	4	sw.	C. F. Sleeper.
Lawrence	Essex	51	26	67.2	− 2.4	86	14	45	31	33	2.67	− 1.35	1.04	0.0	4	6	24	1	w.	Essex Company.
Lowell	Middlesex	100	25	69.2	− 0.2	86	14	46	31	34	3.21	− 1.05	1.15	0.0	5	.....	.....	.....	.....	Prop's Locks and Canals.
Middleboro	Plymouth	53	24	65.2	− 2.3	83	13	36	31	38	1.59	− 2.05	0.60	0.0	8	5	13	13	sw.	A. R. Gurney.
Monson	Hampden	420	26	65.3	− 2.4	82	14†	41	27	30	4.00	− 0.04	1.30	0.0	8	22	7	2	se.	Dr. G. E. Fuller.
Nantucket	Nantucket	15	24	66.8	− 1.2	79	14	51	31	16	2.67	− 0.39	1.39	0.0	10	15	8	8	sw.	U. S. Weather Bureau.
New Bedford	Bristol	88	98	68.4	+ 0.1	82	8	51	31	21	2.01	− 2.25	0.98	0.0	8	22	4	5	sw.	City Engineer.
Norfolk	Norfolk	244	7	66.5	.....	87	9†	34	27	40	0.83	.....	0.33	0.0	4	18	9	4	sw.	Miss Ruby H. Martyn.
Northampton	Hampshire	205	2	66.6	.....	85	14†	39	28	39	3.52	.....	1.45	0.0	4	17	4	10	nw.	D. E. Hoxie.
Plymouth	Plymouth		25	65.5	.....	82	27	45	31	29	2.56	.....	0.73	0.0	6	17	10	4	w.	Miss Laura B. Knapp.
Provincetown	Barnstable	40	23	67.0	− 2.2	80	14	48	31	20	4.42	+ 1.24	1.42	0.0	6	19	0	12	sw.	Gideon Bowley.
Rockport	Essex	25	8	64.8	.....	81	24	49	31	22	2.45	.....	1.22	0.0	4	15	6	10	sw.	C. F. B. Bearse.
Rutland	Worcester	1,160	8	65.5	.....	81	14†	48	26	26	4.23	.....	1.67	0.0	7	15	5	11	sw.	State Sanatorium.
South Egremont	Berkshire	764	8	63.2	.....	82	25	40	27†	34	4.15	.....	1.48	0.0	6	.....	.....	.....	se.	Roscoe C. Taft.
Turners Falls	Franklin	200	19	67.7	+ 0.1	80	25	48	27	29	1.68	− 1.42	0.65	0.0	4	.....	.....	.....	.....	Turners Falls Co.
Westboro	Worcester	298	36	68.6	− 1.1	87	14	41	27†	38	3.78	− 0.35	1.55	0.0	9	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	19	65.4	.....	83	25	43	28†	34	2.01	.....	0.80	0.0	4	15	10	6	s.	Williams College.
Worcester	Worcester	518	18	68.5	− 0.4	85	25	52	27	23	3.61	+ 0.19	0.79	0.0	8	12	8	11	sw.	G. W. Swan.
Rhode Island.																				
Block Island	Newport	26	30	68.2	− 0.5	80	13	57	31	16	2.34	− 1.14	1.43	0.0	9	18	5	8	sw.	U. S. Weather Bureau.
Bristol	Bristol	53	24	67.4	− 1.9	77	12†	51	31	18	2.58	− 1.10	0.84	0.0	10	.....	.....	.....	.....	N. G. Herreshoff.
Kingston	Washington	250	21	66.6	− 2.0	83	13†	47	31	32	3.96	− 0.14	1.00	0.0	9	11	13	7	sw.	Nathaniel Helme.
Narragansett Pier	Newport	22	28	66.0	− 2.9	80	13	47	31	25	2.58	− 1.47	0.75	0.0	10	17	8	6	s.	U. S. Weather Bureau.
Providence	Providence	182	6	67.8	− 3.2	84	24†	47	31	23	2.62	− 1.41	0.65	0.0	11	5	18	8	sw.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	17	69.8	.....	87	25	50	27†	30	2.32	.....	1.33	0.0	10	12	15	4	sw.	William Jennings.
Canton	Hartford	900	49	65.0	− 2.8	82	25	43	27	30	3.68	− 1.35	2.52	0.0	5	15	8	8	nw.	G. J. Case.
Colchester	New London	370	24	66.4	− 2.7	85	12	42	27†	33	1.94	− 2.42	0.64	0.0	8	15	8	8	w.	S. P. Willard.
Cream Hill	Litchfield	1,300	14	64.8	− 1.8	83	14	43	27	32	5.24	+ 0.67	2.00	0.0	7	15	6	10	sw.	C. L. Gold.
Danielson	Windham	300	8	66.5	.....	85	25	41	27	35	1.37	.....	0.62	0.0	7	16	10	5	e.	F. E. Bitgood.
Hartford	Hartford	159	6	68.8	− 1.0	84	14	48	27	29	2.98	− 1.58	1.55	0.0	10	4	13	14	.....	U. S. Weather Bureau.
Hawleyville	Fairfield	600	12	66.9	− 1.5	82	3†	44	27†	36	4.59	− 0.36	1.45	0.0	7	14	10	7	w.	Edson N. Hawley.
New Haven	New Haven	107	123	69.2	− 0.9	84	25	50	27	22	3.21	− 1.78	1.04	0.0	12	11	13	7	s.	U. S. Weather Bureau.
New London	New London	47	40	69.7	− 0.1	85	5†	48	31	31	2.15	− 2.42	0.76	0.0	7	14	12	5	sw.	Thos. C. Dillon.
North Grosvenordale	Windham	400	20	67.1	− 2.1	85	25	41	26	39	1.32	− 2.25	0.52	0.0	4	13	13	5	sw.	Grosvenor Dale Co.
Norwalk	Fairfield	116	20	68.6	− 1.4	87	25	46	28	33	1.36	− 2.35	0.64	0.0	8	10	18	3	sw.	Geo. C. Comstock.
Southington	Hartford	140	41	67.0	− 2.1	84	25	42	28	35	3.05	− 1.50	1.40	0.0	7	4	23	4	s.	Luman Andrews.
Storrs	Tolland	640	22	66.5	− 1.1	83	25	46	27†	32	1.99	− 1.84	0.62	0.0	5	15	9	7	s.	Agricultural Exp. Station.
Voluntown	New London	260	25	65.8	− 2.7	82	7†	39	31	35	3.31	− 1.06	1.20	0.0	8	18	3	10	se.	F. S. Bitgood.
Waterbury	New Haven	400	35	68.9	− 0.7	85	11†	44	28	35	3.16	− 0.81	1.35	0.0	8	.....	.....	.....	.....	N. J. Welton.
New York.																				
Addison	Steuben	1,000	20	69.6	+ 1.9	95	15	41	27	43	2.07	− 1.31	0.66	0.0	9	20	9	2	sw.	H. R. Ainsworth.
Albany	Albany	97	89	69.6	+ 0.1	86	25	47	27	28	1.38	− 2.58	0.54	0.0	6	10	17	4	s.	U. S. Weather Bureau.
Alfred	Allegany		15	65.2	− 0.3	88	16	38	27	36	2.55	− 1.12	0.93	0.0	9	.....	.....	.....	.....	F. S. Place.
Amsterdam	Montgomery	277	6	67.2	.....	89	25	41	27	37	1.36	.....	0.30	0.0	8	22	4	5	e.	Emery Elwood.
Athens	Greene	90	8	69.3	.....	88	24	46	27	32	3.35	.....	1.32	0.0	6	14	13	4	sw.	E. C. Brooks.
Ballston Lake	Saratoga	400	6	66.6	.....	87	25	40	28	39	1.68	.....	0.64	0.0	6	14	10	7	s.	Geo. R. Schauber.

TABLE 1.—*Climatological data for August, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York—Cont'd.																				
Bedford	Westchester	450	19	70.7	+ 0.9	88	14†	46	29	36	2.44	− 2.67	0.76	0.0	11	23	6	2	.....	Dr. L. Rosenberg.
Binghamton	Broome	875	19	66.2	− 1.3	88	4	40	27	36	1.10	− 2.25	0.46	0.0	5	11	9	11	e.	U. S. Weather Bureau.
Bouckville	Madison	1,350	13	63.5	0.0	85	3†	39	27	33	3.35	− 0.22	0.95	0.0	9	8	15	8	sw.	L. W. Griswold.
Boyds Corners	Putnam	560	28	.....	.....	.....	.....	.....	.....	.....	3.03	− 1.93	.....	.....	.....	.....	.....	.....	.....	Thomas Manning.
Carmel	do	500	18	67.6	− 2.3	86	28	46	28	40	3.48	− 1.81	1.58	0.0	6	13	6	12	se.	Do.
Chatham	Columbia	470	9	67.8	.....	86	14†	42	27	32	2.97	.....	1.24	0.0	6	19	7	5	s.	Morton R. Tank.
Cooperstown	Otsego	1,250	56	65.8	+ 0.4	84	15†	38	27	35	2.34	− 2.21	0.72	0.0	8	15	11	5	s.	Elizabeth C. Keese.
Corinth	Saratoga	542	8	.....	.....	.....	.....	.....	.....	.....	3.32	.....	1.00	0.0	5	.....	.....	.....	.....	A. M. Hollister.
Cortland	Cortland	1,129	48	68.8	+ 3.8	88	15†	39	27	35	1.59	− 2.21	0.46	0.0	5	21	7	3	s.	F. G. Baker.
Cutchogue	Suffolk	32	33	69.2	− 1.2	83	13	50	31	29	2.48	− 1.19	0.80	0.0	9	11	17	3	sw.	Wm. A. Fleet
De Ruyter	Madison	1,300	7	66.7	.....	87	4†	36	27	40	3.55	.....	0.90	0.0	10	17	6	8	s.	B. D. Crandall.
Easton	Washington	.....	20	.....	.....	.....	.....	.....	.....	.....	3.45	− 1.36	1.65	0.0	3	.....	.....	.....	.....	H. Taber.
Elmira	Chemung	863	31	70.6	+ 1.5	93	14	41	27	41	1.60	− 1.64	0.61	0.0	5	10	16	5	se.	Gerity Bros.
Fort Hunter	Montgomery	280	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Wing.
Fort Plain	do	316	6	68.4	.....	89	25	44	27	36	1.97	.....	0.38	0.0	8	18	9	4	w.	Abram Devendorf.
Glens Falls	Warren	340	19	67.8	+ 0.3	87	13†	40	27	36	4.72	+ 0.85	2.37	0.0	5	12	9	10	w.	Prof. C. L. Williams.
Gloversville	Fulton	850	18	65.2	+ 0.1	87	25	37	27	39	1.01	− 3.04	0.46	0.0	5	16	10	5	w.	W. L. McLean.
Greenfield Center	Saratoga	314	12	66.8	− 0.8	85	13	41	27	35	2.84	− 1.33	0.94	0.0	6	20	7	4	s.	S. E. Darrow.
Greenwich	Washington	425	13	69.4	+ 2.0	90	25	42	27	37	2.70	− 0.97	0.85	0.0	6	14	16	1	w.	Homer J. Whitcomb.
Griffin Corners	Delaware	2,260	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kelsey H. Kelly.
Haskinville	Steuben	.....	15	.....	.....	.....	.....	.....	.....	.....	2.85	− 0.45	1.35	0.0	5	.....	.....	.....	.....	W. G. Collins.
Homer	Cortland	.....	2	65.5	.....	87	4	37	27	36	2.31	.....	0.83	0.0	7	12	12	7	nw.	Charles C. Mortimer.
Hoosick Falls	Rensselaer	410	8	.....	.....	.....	.....	.....	.....	.....	2.32	.....	1.15	0.0	5	24	3	4	s.	Sanford L. Cluett.
Indian Lake	Hamilton	1,705	11	61.9	− 0.3	89	14	32	30	42	5.64	+ 2.21	2.00	0.0	7	15	8	8	n.	Lester Severie.
Jeffersonville	Sullivan	1,240	7	63.9	.....	88	4	35	27	43	2.63	.....	1.30	0.0	6	17	12	2	w.	Chas. Wilfert, Jr.
Lake Pleasant	Hamilton	.....	3	57.0	.....	78	25	39	27	27	4.80	.....	2.30	0.0	8	.....	.....	.....	.....	Willet Lawrence.
Liberty	Sullivan	2 300	28	63.7	− 0.7	82	5†	43	27†	32	1.04	− 3.25	0.45	0.0	5	21	5	5	se.	Dr. H. M. King.
Little Falls	Herkimer	924	12	66.8	− 0.1	86	13†	42[2]	27	31[a]	3.04	− 0.69	0.93	0.0	8	19	8	4	w.	O. J. Dempster.
Mohonk Lake	Ulster	1,245	14	66.2	− 0.9	82	2†	46	27	28	6.39	+ 1.33	3.54	0.0	8	13	8	10	sw.	Albert K. Smiley.
Morehouseville	Hamilton	1,697	2	61.6	.....	84	15	35	27	38	6.02	.....	2.40	0.0	10	9	12	10	w.	Theodore C. Remonda.
Mount Hope	Westchester	200	13	68.5	− 2.0	90	25	45	27	33	1.63	− 3.68	0.60	0.0	5	2	14	15	.....	Wm. A. Cornelius.
Newark Valley	Tioga	825	23	.....	.....	.....	.....	.....	.....	.....	1.22	− 3.13	0.60	0.0	6	24	2	5	.....	M. D. Clinton.
New Berlin	Chenango	.....	3	.....	.....	.....	.....	.....	.....	.....	2.54	.....	0.91	0.0	8	12	8	11	s.	Roger Greene.
New Lisbon	Otsego	1 234	20	63.0	− 0.6	87	4	34	27	43	2.56	− 2.07	0.74	0.0	9	13	9	9	s.	G. A. Yates.
New York City	New York	314	85	72.2	0.0	85	25	57	27	18	2.13	− 2.40	0.80	0.0	12	7	11	13	s.	U. S. Weather Bureau.
North Creek	Warren	1,002	2	65.4	.....	90	13	41	19	31	4.74	.....	2.90	0.0	8	14	11	6	.....	W. G. Kenwell.
Northville	Fulton	742	8	.....	.....	.....	.....	.....	.....	.....	2.46	.....	0.76	0.0	6	.....	.....	.....	.....	P. C. Pickard.
Norwich	Chenango	1,015	4	63.0[d]	.....	87	4	40	12†	38[d]	2.68	.....	0.90	0.0	8	.....	.....	.....	.....	P. L. Clark.
Oneonta	Otsego	1,112	16	67.9	+ 0.2	89	4	39	27	40	1.46	− 3.46	0.50	0.0	8	20	4	7	sw.	H. W. Lee.
Oxford	Chenango	916	45	66.0	+ 0.4	85	15	42	27†	34	2.14	− 1.97	1.44	0.0	4	9	17	5	w.	John P. Davis.
Port Jervis	Orange	470	26	68.9	− 0.2	90	14	42	27	37	4.73	+ 0.31	1.10	0.0	12	12	10	9	sw.	Prof. John M. Dolph.
Salisbury	Herkimer	1,526	13	64.1	− 0.8	86	15†	36	27	37	2.91	− 2.22	1.25	0.0	9	18	7	6	w.	Joseph Ryan.
Salisbury Mills	Orange	314	11	66.8	.....	88	25	37	28	43	2.32	− 2.50	1.45	0.0	5	17	6	8	w.	H. P. Ramsdell.
Scarsdale	Westchester	200	6	66.2	.....	86	14†	48	28	28	1.77	.....	0.80	0.0	7	15	13	3	ne.	C. H. Wilmarth.
Setauket	Suffolk	40	25	70.0	− 0.6	86	25	53	28†	24	0.89	− 3.41	0.15	0.0	10	13	9	9	s.	Selah B. Strong.
Sherburne	Chenango	.....	3	.....	.....	.....	.....	.....	.....	.....	3.09	.....	0.98	0.0	6	.....	.....	.....	.....	E. B. Collins.
Southampton	Suffolk	36	9	68.8	.....	81	13†	50	28†	23	1.47	.....	0.37	0.0	10	17	12	2	ne.	W. L. Jagger.
Southeast Reservoir	Putnam	310	15	.....	.....	.....	.....	.....	.....	.....	3.34	− 1.85	.....	.....	.....	.....	.....	.....	.....	Thomas Manning
Spier Falls	Saratoga	400	9	66.6	.....	85	15	41	27	36	3.93	.....	2.31	0.0	4	21	7	3	sw.	W. F. Anderson.
Trenton Falls	Oneida	751	7	.....	.....	.....	.....	.....	.....	.....	4.20	.....	1.37	0.0	8	.....	.....	.....	.....	C. W. Young.
Tribeshill	Montgomery	268	7	.....	.....	.....	.....	.....	.....	.....	1.40	.....	0.40	0.0	6	.....	.....	.....	.....	R. S. Marshall.
Utica	Oneida	537	44	.....	.....	.....	.....	.....	.....	.....	2.95	− 0.69	0.87	0.0	7	.....	.....	.....	.....	W. E. Young.
Wading River	Suffolk	112	4	68.8	.....	84	3†	45	28†	33	1.98	.....	1.29	0.0	11	17	5	9	sw.	H. B. Fullerton.
Wappingers Falls	Dutchess	110	20	67.4	− 2.9	82	3†	48	27	27	5.93	+ 1.22	2.06	0.0	8	13	15	3	se.	H. C. Townsend.
Warwick	Orange	538	16	.....	.....	.....	.....	.....	.....	.....	1.82	− 2.52	0.50	0.0	6	.....	.....	.....	.....	John W. Sly.
Waverly	Tioga	824	28	67.8	+ 0.4	91	4	36	28	47	1.23	− 2.20	0.35	0.0	7	9	11	11	s.	Hon. J. F. Shoemaker.
West Berne	Albany	946	11	63.4	− 3.6	90	4	35	27	44	1.52	− 2.34	0.72	0.0	4	8	9	14	se.	W. J. Haverly.
West Point	Orange	167	61	70.2	− 2.0	85	12†	52	28	29	2.81	− 2.03	1.65	0.0	9	10	10	11	se.	Maj. Chas. M. Gandy.
Windham	Greene	1,520	10	61.2	− 3.2	84	14	36	27	40	2.32	− 1.60	0.88	0.0	4	14	14	3	sw.	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	22	71.2	+ 1.9	91	4	46	27	30	2.10	− 1.43	1.20	0.0	6	.....	.....	.....	.....	C. W. Billin.
Bethlehem	Northampton	260	1	72.4	.....	88	3†	49	28	29	2.78	.....	1.06	0.0	8	16	0	15	se.	Prof. E. C. Roest.
Clearfield	Clearfield	1,107	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Raymond C. Ogden.
Emporium	Cameron	1,050	22	67.5	− 0.7	86	3†	42	27†	34	1.97	− 1.76	0.78	0.0	5	13	14	4	e.	T. B. Lloyd.
Ephrata	Lancaster	384	11	70.2	− 1.7	90	3	44	27	34	4.61	− 0.03	1.58	0.0	9	14	7	10	w.	W. L. Frantz.
Everett	Bedford	1,080	13	69.2	− 0.3	92	3	42	27†	38	1.58	− 3.20	0.92	0.0	4	3	26	2	w.	B. L. Steckman.
George School	Bucks	184	4	69.6[d]	.....	88	3	46[b]	27	31[b]	5.37	.....	1.13	0.0	13	14	5	12	s.	Prof. A. C. Smedley.
Gettysburg	Adams	600	36	71.9	+ 0.5	95	3	44	27	40	1.51	− 2.21	0.66	0.0	6	10	14	7	n.	Col. E. B. Cope.
Gordon	Schuylkill	804	7	68.1	.....	91	3	38	27	39	4.12	.....	1.49	0.0	6	9	16	6	w.	Capt. J. G. Johnson.
Hamburg	Berks	380	19	70.4	− 1.8	91	3	45	28	36	2.41	− 2.99	1.12	0.0	4	16	11	4	se.	W. J. Kalbach.
Harrisburg	Dauphin	361	22	71.9	− 0.7	91	3	49	27	28	2.21	− 1.64	0.77	0.0	9	7	12	12	e.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	22	70.1	− 0.4	95	3	43	27	42	3.24	− 0.77	1.06	0.0	5	14	13	4	e.	Prof. W. J. Swigart.
Hyndman	Bedford	977	4	70.6	.....	94	3	40	27	48	2.59	.....	0.90	0.0	6	10	16	5	se.	H. C. Mauk.
Lawrenceville	Tioga	1,006	13	69.0	− 1.4	93	15	40	27†	44	2.30	− 1.11	0.60	0.0	7	21	4	6	.....	C. P. Darling.
Lebanon	Lebanon	458	22	72.4	+ 0.6	92	3	50	27†	40	2.94	− 1.75	1.20	0.0	5	10	9	12	se.	G. W. Hayes, C. E.
Lock Haven	Clinton	560	22	70.9	− 0.1	93	3	42	29	45	1.93	− 2.35	0.80	0.0	4	11	15	5	w.	Prof. J. A. Robb.
Marion	Franklin	640	7	72.7	.....	98	3	44	27	41	1.41	.....	0.50	0.0	5	20	6	5	.....	Hon. C. B. Hege.
Mauch Chunk	Carbon	634	21	68.6	− 1.7	88	4	42	27†	38	4.00	− 0.73	1.66	0.0	9	9	15	7	w.	F. C. Wintermute.
Mifflintown	Juniata	445	7	69.8	.....	90	3†	41	28	39	2.40	.....	0.90	0.0	4	17	6	8	w.	Wellington Smith.
Milford	Pike	455	8	67.3	.....	87	3†	38	27	39	4.76	.....	1.21	0.0	11	9	20	2	se.	Mrs. Alla Doughty.
Montrose	Susquehanna	1,658	7	66.4	.....	91	4	37	27	41	1.71	.....	0.60	0.0	5	.....	.....	.....	.....	J. R. Beebe.
Muncy Valley	Sullivan	519	1	68.0	.....	89	4	43	26	33	2.73	.....	1.36	0.0	4	24	0	7	.....	F. W. Buck.
New Germantown	Perry	873	7	69.4	.....	93	3	40	27†	40	1.53	.....	1.00	0.0	4	21	3	7	w.	Ed. C. Johnston.
Philadelphia (1)	Philadelphia	117	40	73.2	− 0.6	86	25	57	27	19	5.72	+ 1.11	1.72	0.0	11	5	10	16	se.	U. S. Weather Bureau.
Pocono Lake	Monroe	1,662	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pocono Lake Ice Co.
Reading	Berks	280	37	71.8	− 0.9	88	3	45	27	31	2.90	− 1.58	1.02	0.0	9	.....	.....	.....	.....	Franklin Yeager.
Scranton	Lackawanna	805	10	68.6	− 0.7	90	4	44	27	33	2.51	− 1.18	0.94	0.0	6	5	12	14	s.	U. S. Weather Bureau.
Selinsgrove	Snyder	455	22	70.9	− 0.6	91	3	41	27	40	2.59	− 1.93	0.73	0.0	7	0	22	9	se.	J. M. Boyer, C. E.
State College	Center	1,191	22	67.5	− 1.2	88	3	42	27	38	2.07	− 1.90	0.78	0.0	6	.....	.....	.....	s.	Prof. Wm. Frear.
Towanda	Bradford	754	16	67.8	− 0.7	90	4	41	27	37	2.08	− 1.52	0.94	0.0	5	15	11	5	sw.	Hiram E. Bull, C. E.
Wellsboro	Tioga	1,327	33	66.8	+ 1.2	90	15	39	1†	42	2.47	− 1.03	1.26	0.0	6	14	12	5	sw.	O. L. White.
West Chester	Chester	455	55	71.5	− 0.4	87	3	51	27	25	6.46	+ 1.93	1.63	0.0	11	11	8	12	s.	J. C. Green, D. D. S.
Williamsport	Lycoming	530	20	70.4	+ 0.2	89	3†	44	27	33	1.49	− 2.37	0.67	0.0	3	16	9	6	se.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	22	70.3	− 2.2	85	6	58	21†	20	4.97	− 0.17	1.38	0.0	10	10	9	12	e.	B. H. Obert.
Atlantic City	Atlantic	16	37	72.1	− 0.5	86	6	58	27	20	1.84	− 2.46	1.02	0.0	5	9	8	14	s.	U. S. Weather Bureau.
Bayonne	Hudson	50	20	71.4	− 1.5	89	25	50	27	26	1.83	− 3.28	0.50	0.0	12	11	11	9	se.	J. H. Eadie.

TABLE 1.—*Climatological data for August, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
New Jersey—Cont'd.																			
Belvidere	Warren	289	19	68.9	− 1.9	86	4	44	27	34	3.07	− 1.74	0.89	0.0	7	9	10	12	.....	S. J. Hixson.
Bergen Point	Hudson	37	13	71.0	− 0.7	87	25	50	28	27	2.53	− 2.53	0.59	0.0	11	7	11	13	se.	Dr. W. H. Mitchell.
Boonton	Morris	413	20								2.93	− 2.46	1.32	0.0	9					Foster Peer.
Bridgeton	Cumberland	30	29	72.5	− 2.1	89	3	54	27	28	5.43	+ 1.04	2.15	0.0	12	11	5	15	ne.	H. A. Jorden.
Burlington	Burlington	12	26								5.36	− 0.25	1.14	0.0	10					D. S. B. McCoy.
Canton	Salem	24	16								3.41	− 1.84	2.06	0.0	9	10	7	14		J. H. Maskell.
Cape May City	Cape May	17	26	72.8	− 0.6	86	5	58	27	22	3.90	− 0.36	1.67	0.0	13	8	21	.2	se.	U. S. Weather Bureau.
Charlotteburg	Passaic	719	18	66.6	− 1.3	85	12	38	28	38	2.87	− 1.51	1.60	0.0	8	7	13	11	se.	G. S. Briggs.
Chatham	Morris	234	8								4.07		1.20	0.0	11					M. A. Butler.
Clayton	Gloucester	126	17	71.9	− 1.6	90	3	51	27	29	3.39	− 1.12	0.71	0.0	11	10	11	10	sw.	W. T. Farley.
College Farm	Middlesex	100	15	70.5	− 0.8	86	1†	48	27	32	6.29	+ 1.01	3.02	0.0	12	8	12	11	se.	G. B. Thrasher.
Culver's Lake	Sussex	848	9								2.61		0.80	0.0	7	9	8	14	s.	B. E. Riker.
Dover	Morris	575	26	66.2	− 3.0	83	4	42	27	33	3.20	− 1.80	1.59	0.0	9	9	12	10	.....	W. C. Harris.
Elizabeth	Union	33	31	71.6	− 1.9	86	12	52	27	28[b]	1.79	− 2.75	0.52	0.0	11	10	8	13	s.	W. M. Oliver.
Flemington	Hunterdon	187	22	70.6	− 1.2	89	13	44	27	36	3.82	− 0.59	1.26	0.0	11	8	10	13	e.	H. E. Deats.
Haddonfield	Camden	75	16	71.2	− 1.5	86	3†	50	27	28	8.46	+ 3.87	2.31	0.0	11	7	11	13	s.	C. F. Richardson.
Hammonton	Atlantic	80	12								4.91	− 0.15	1.39	0.0	9					Orville Bassett.
Hightstown	Mercer	85	18	70.6	− 1.3	91	3	46	27	36	5.09	+ 0.32	1.53	0.0	9	8	11	12	ne.	Ernst Wenger.
Imlaystown	Monmouth	106	24																	Dr. F. C. Price.
Indian Mills	Burlington	76	21	70.5	− 2.6	90	3	50	21	35	4.85	− 0.32	1.18	0.0	10	9	10	12	se.	James Armstrong.
Jersey City	Hudson	15	12	72.6	− 0.7	90	25	53	27	23	1.81	− 2.84	0.73	0.0	12	10	11	10	se.	S. K. Pearson, jr.
Lakewood	Ocean	54	8																	H. R. Major.
Lambertville	Hunterdon	95	24	70.2	− 2.2	89	3	44	27	33	4.39	− 0.37	1.21	0.0	9	8	11	12	sw.	W. R. Bowne.
Layton	Sussex	550	11	66.4	− 2.0	88	3	36[c]	27	44[c]	2.90	− 0.74	0.90	0.0	6	10	10	11	sw.	W. C. Hursh.
Little Falls	Passaic	175	7								2.02		0.80	0.0	9					A. Sweetman.
Long Branch	Monmouth	30	3	70.6		85	4	54	21	24	3.77		1.52	0.0	9	10	9	12	se.	B. B. Bobbit.
Mahwah	Bergen	312	8																	C. L. Barker.
Moorestown	Burlington	71	48	71.2	− 1.3	89	4	50	27	27	6.08	+ 1.34	1.65	0.0	10	7	12	12	s.	J. C. Beans.
Newark	Essex	140	67	71.0	− 1.4	88	25	50	27	27	2.73	− 2.51	1.15	0.0	11	9	11	11	se.	Prof. Wm. Wiener.
New Brunswick	Middlesex	61	57	70.4	− 2.0	90	1†	45	27	40[c]	3.64	− 1.45	1.25	0.0	9	9	11	11	.....	W. T. Woerner.
Newton	Sussex	678	31	68.4	− 1.4	87	24	39	27	43	2.91	− 1.50	0.78	0.0	8	10	6	15	s.	B. H. Kienbaum.
Northfield	Atlantic		3								2.41		1.09	0.0	9					W. L. Flick.
Paterson	Passaic	110	39	70.0	− 2.0	87	25	49	27	31	1.76	− 3.37	0.90	0.0	8	8	10	13	s.	H. A. Probert.
Phillipsburg	Warren	196	13	70.4	− 1.4	90	2†	46	27	35	2.84	− 1.50	0.87	0.0	11	8	12	11	s.	D. W. Smith
Plainfield	Union	100	24	70.4	− 0.8	87	3†	47	27	34	4.94	+ 0.07	2.75	0.0	12	7	13	11	ne.	John Neagle.
Pleasantville	Atlantic	26	12								3.17	− 1.52	1.66	0.0	9	10	7	14	.....	L. Van Gilder.
Pompton Plains	Morris	195	8								2.59		1.54	0.0	8					M. S. Taylor.
Rancocas	Burlington	68	47								5.30	+ 0.26	1.28	0.0	8	10	5	16	sw.	Spencer Haines.
Rivervale	Bergen	70	19	67.4[b]	− 2.2	89	4	44[m]	28	37[m]	2.01	− 2.25		0.0	8				sw.	G. S. M. Holdrum.
Somerville	Somerset	76	27	71.2	− 0.3	88	1†	45	27	36	5.25	+ 0.54	2.62	0.0	11	10	8	13	se.	P. Hardcastle.
South Orange	Essex	200	40																	Dr. W. J. Chandler.
Sussex	Sussex	442	20	68.6	− 1.0	86	4	42	27	35	2.52	− 1.80	0.97	0.0	7	10	10	11	sw.	Prof. W. H. Seeley.
Trenton	Mercer	60	38	72.6	− 1.1	92	3	51	27†	32				0.0	10	7	11	13	sw.	Paul H. Wendel.
Tuckerton	Ocean	23	17	70.9	− 1.8	88	6	50	21	35	4.13	− 1.65	1.82	0.0	8	8	10	13	sw.	F. R. Austin.
Vineland	Cumberland	118	41	71.6	− 2.0	88	3†	52	27	32	4.78	− 0.11	1.78	0.0	8	10	10	11	se.	Alfred Chalmers.
Woodbine	Cape May	43	19	71.5	− 1.2	87	4†	51	21	32	4.54	+ 0.24	2.53	0.0	12					Prof. H. A. Dodge.
West Virginia.																				
Bayard	Grant	2,500	8	65.8		90	3	40	7†	44	1.21		0.63	0.0	7	16	11	4	w.	Solomon Clark.
Burlington	Mineral	875	15	70.8	− 0.7	92	3	43	27	39[c]	2.84	− 0.82	1.30	0.0	7	14[c]	12[c]	5[c]	w.	J. W. Vandiver.
Franklin	Pendleton		3	67.8		89	14	47	7	37[c]	3.32		1.20	0.0	4	22[c]	4[c]	2[c]	.....	A. A. Martin.
Lost City	Hardy		4																	B. D. Hinegardner.
Martinsburg	Berkeley	435	19	73.0	0.0	95	3	46	27	36	1.06	− 2.58	0.37	0.0	5	18	9	4	se.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	14	71.8	− 0.7	97	5	43	28	45	0.84	− 2.83	0.25	0.0	4	7	23	1	sw.	John C. Fisher.
Romney	Hampshire	824	14	71.6	− 1.3	96	3	43	27	42[c]	1.51	− 2.19	0.45	0.0	6	16[c]	11[c]	1[c]	w.	John C. Linthicum.
Upper Tract	Pendleton	1,230	12	70.2	− 1.3	92	3	46	7†	43[b]	1.16	− 3.34	0.45	0.0	3	5	21	5	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anne Arundel	45	32	72.2	− 4.4	89	24	62	27	21	2.03	− 2.84	0.90	0.0	6	19	5	7	se.	W. M. Abbott.
Bachmans Valley	Carroll	880	17	72.0	+ 0.6	92	3	47	27	37	1.45	− 3.76	0.55	0.0	7	19	10	2	s.	Elmer E. Yingling.
Baltimore	Baltimore	115	40	74.4	− 0.3	90	3	57	27	22	1.37	− 2.84	0.49	0.0	11	6	12	13	s.	U. S. Weather Bureau.
Cambridge	Dorchester	25	12	75.8	− 0.5	93	3	58	21†	30	3.98	− 0.56	1.64	0.0	10	12	6	13	se.	T. E. Keenan.
Cheltenham	Prince George	230	10	73.0		90	3	56	1†	32	1.69		0.60	0.0	11	9	12	10	nw.	J. E. Burbank.
Chestertown	Kent	80	25	73.4	− 0.2	91	3	55	27	25	4.21	− 0.53	1.60	0.0	11	11	7	13	s.	M. W. Thomas.
Chewsville	Washington	530	13	72.3	+ 0.1	93	3	47	27	36	1.23	− 2.60	0.35	0.0	8	8	22	1	se.	D. Paul Oswald.
Clear Spring	...do	650	13	73.5	+ 1.9	90	3†	49	1	36	1.75	− 2.78	0.67	0.0	10	11	18	2	sw.	W. W. Frantz.
Coleman	Kent	80	12	73.6		92	3	56	27	29	3.48	− 0.68	1.40	0.0	8	13	8	10	sw.	J. S. Harris.
College Park	Prince George	170	20	73.4	− 0.2	92	3	50	20	38	1.59	− 2.49	0.45	0.0	10	17	12	2	se.	Prof. H. J. Patterson.
Cumberland	Allegany	700	36								1.34	− 1.95	0.50	0.0	7					J. W. Frantz.
Darlington	Harford	300	18	71.2	− 1.3	88	6	51	27†	31	1.99	− 2.63	0.96	0.0	6	13	9	9	s.	Prof. A. F. Galbreath.
Denton	Caroline	42	15	72.4	− 1.2	89	3	53	31	32	4.68	+ 1.12	1.30	0.0	9	15	7	9	se.	H. B. Mason.
Easton	Talbot	35	19	72.0	− 2.4	89	3	56	27	27	3.82	+ 0.06	1.10	0.0	12	12	7	12	sw.	Henry Shreve.
Emmitsburg	Frederick	720	37																	Jno. H. Eckenrode.
Fallston	Harford	450	40	71.3	− 0.7	87	3†	50	27	29	2.49	− 2.35	1.20	0.0	10	1	25	5	s.	J. H. Curtiss.
Frederick	Frederick	275	33	74.7	+ 1.1	95	25	49	27	35	0.54	− 2.73	0.30	0.0	6	12	10	9	.....	Henry Trail.
Frostburg	Allegany	1,929	9	69.9		92	3	41	27	36	1.64		0.63	0.0	10	17	8	6	.....	L. B. Abbott.
Great Falls	Montgomery	200	19	73.2	− 0.9	92	3	52	20	35	1.34	− 2.13	0.43	0.0	7	13	16	2	nw.	J. W. Bissett.
Green Spring Furnace	Washington	450	18	73.3	− 0.3	94	3	45	27	37	1.59	− 2.69	0.82	0.0	5	20	6	5	se.	E. G. Kinsell.
Keedysville	...do	400	6	73.6		95	3	44	27	37	1.06		0.47	0.0	8	18	8	5	s.	J. A. Miller.
Lake Montebello	Baltimore		1								1.63		0.59	0.0	10	10	8	13	e.	Martin L. Dobler.
La Plata	Charles	190	1																	Prof. R. H. Lee Reich.
Laurel	Prince George	150	16	72.0	− 2.0	93	2	52	20	37	1.94	− 2.62	0.52	0.0	6	4	25	2	.....	Dr. T. M. Baldwin.
Monrovia	Frederick	630	23	72.7	− 0.6	92	3	48	27	31	1.84	− 2.74	1.43	0.0	9	11	11	9	s.	J. H. Lawson.
Pocomoke City	Worcester	37	17	75.0	− 1.0	95	25	60	21	26	9.23	+ 5.24	1.75	0.0	14	15	8	8	e.	Hon. R. M. Stevenson.
Porto Bello	St. Mary	38	5	75.2		90	4†	62	7	25	2.75		1.05	0.0	4	16	7	8	se.	Alpheus Hyatt.
Princess Anne	Somerset	17	17	72.3	− 1.4	86	3	55	1	29	12.63	+ 7.58	7.19	0.0	13	2	18	11	sw.	Jas. R. Stewart.
Rockville	Montgomery	421	3																	Dr. Geo. E. Lewis.
Salisbury	Wicomico	23	5	73.4[c]		91	3	55	1†	33[c]	8.29		1.52	0.0	15	9	19	3	e.	W. E. Downing.
Sanatorium	Frederick	1,200	2	70.6		90	3	50	26	32[a]	1.87		0.51	0.0	8	16[a]	6[a]	8[a]	se.	Dr. W. M. Garrison.
Solomons	Calvert	20	19	75.4	− 1.8	90	6	61	27	23	4.56	+ 0.55	2.21	0.0	11	0	11	20	se.	Dr. W. H. Marsh.
Sudlersville	Queen Anne	65	11	72.8	− 0.9	93	3	54	27	34	2.78	− 0.54	0.69	0.0	13	14	10	7	e.	Jas. E. Higman.
Takoma Park	Montgomery	320	12	71.4	− 1.8	88	3†	56	27	27	1.93	− 3.30	0.49	0.0	7	10	9	12	.....	L. M. Moores.
Taneytown	Carroll	450	11	71.4		92	3	45	27	38	3.95	− 0.07	3.26	0.0	6	26	2	3	se.	R. A. Nusbaum.
Towson	Baltimore	465	2	72.0		90	3	50	27	32	1.14		0.45	0.0	9	16	8	7	se.	C. W. E. Treadwell.
Van Bibber	Harford	100	13	70.8	− 2.8	89	3†	52	20	31	3.65	− 1.48	1.52	0.0	9	8	16	7	se.	W. Benj. Ford.
Westernport	Allegany	1,000	16	71.5	0.0	94	3	45	28	41	1.18	− 2.23	0.48	0.0	7				.....	Prof. O. H. Bruce.
Woodstock	Baltimore	392	36	73.8	+ 1.5	91	3	54	20†	31	0.90	− 3.24	0.38	0.0	9	14	13	4	se.	Rev. A. J. Donlon, S. J.
Delaware.																				
Delaware City	New Castle	20	8	72.2		86	3†	51	20	26	3.16		0.63	0.0	9	21	2	8	s.	H. Morton Price.

TABLE 1.—*Climatological data for August, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Delaware—Cont'd.																				
Dover	Kent	40	22	74.1	− 0.7	92	3†	55	20	35	2.19	− 1.91	0.65	0.0	7	8	11	12	e.	Thos. F. Dunn.
Milford	do	20	26	74.0	− 0.8	89	3†	53	21	28	3.10	− 0.44	1.69	0.0	14	12	7	12	e.	C. J. Holzmueller.
Millsboro	Sussex	20	18	72.0	− 2.5	91	6	58	1†	29	4.23	+ 0.85	1.20	0.0	12	17	2	12	sw.	Rev. L. W. Wells.
Seaford	do	40	17	72.0	− 2.5	89	3	56	21	25	3.92	− 0.10	1.10	0.0	12	17	7	7	s.	E. B. Brown.
District of Columbia.																				
Washington	District of Columbia	112	40	73.8	− 0.7	90	3	58	27	29	1.26	− 3.14	0.48	0.0	11	11	10	10	ne.	U. S. Weather Bureau.
Virginia.																				
Culpeper	Culpeper	450	2	72.4	.....	89	4	55	7	32	3.09	.....	1.78	0.0	8	7	20	4	s.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	30	70.1	− 2.2	89	6	46	7	41	4.61	+ 0.49	1.20	0.0	12	4	25	2	s.	Rev. L. J. Heatwole.
Doswell	Hanover	134	9	74.4	.....	94	3	56	7	37	2.37	.....	1.00	0.0	9	.....	.....	.....	w.	Rich., Fdksbg. & Pot. R. R.
Eastville	Northampton	15	.....	74.4	.....	91	4	59	1	26	6.42	.....	2.00	0.0	13	15	5	11	se.	Thos. B. Robertson.
Fredericksburg	Spottsylvania	100	21	73.8	− 1.9	93	3	57	1	32	5.17	+ 0.62	1.85	0.0	11	9	15	7	se.	S. G. Howison.
Lincoln	Loudoun	500	9	73.8	.....	96	2†	45	27	47	0.96	.....	0.48	0.0	4	6	21	4	sw.	Dr. Geo. Roberts.
Mount Weather	Loudoun	1,726	6	68.5	− 0.6	83	3	52	27	21	1.91	− 1.71	0.52	0.0	12	11	13	7	se.	U. S. Weather Bureau.
Quantico	Prince William	16	13	72.0	− 2.6	91	2†	49	21	33	2.49	.....	2.20	0.0	3	.....	.....	.....	nw.	Rich., Fdksbg. & Pot. R. R.
Staunton‡‡	Augusta	1,380	18	71.0	− 2.3	89	3	53	7	33	3.48	− 0.44	1.61	0.0	12	7	17	7	sw.	Ernest Nothnagel.
Stephens City	Frederick	710	18	72.2	− 2.0	94	3	45	27	39	0.34	− 3.48	0.13	0.0	4	14	9	8	se.	B. T. Argenbright.
Warsaw	Richmond	160	18	74.4	− 1.4	92	2	56	20	30	6.17	+ 1.85	1.65	0.0	14	0	28	3	ne.	C. H. Constable.
Woodstock	Shenandoah	927	14	73.2	− 0.7	95	3†	48	28	41	0.93	− 3.12	0.27	0.0	10	15	14	2	w.	Miss A. G. Miley.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
¶ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 1, North Atlantic States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maine.																																	
Bar Harbor	Coast																																
Cornish	Saco		.13		2.40						.17					.18				.60											.05	3.53
Danforth	Penobscot		.20	.05	.43	.40	.15	.05			T.									.65							T.					1.93
Eastport	Coast				.80		T.				.02	.04	.01			.01				.56										T.			1.44
Ellsworth	do				.21	2.00	.08					.02	.05				.74			.85	.11							.02					4.08
Fairfield	Kennebec		.18		2.42	.09						.54				.69				.48							.06					4.46
Farmington	do		.08	T.	1.66	.10					T.	.18				1.17	.23			.45											.07	3.94
Gardiner	do		.41		2.42	.63						.15					.19			.71											.02	4.53
Greenville	do	.04	.46		1.04	T.	.06	.18	T.		.06	.56			.04	.44			.40	.20							.04		T.	.06		.11	3.69
Houlton	St. John		.15		.20	.10	.10			.10										.42													1.07
Lewiston	Androscoggin		.35		3.31							.08				.45				.62													4.81
Madison	Kennebec	.02	.12		2.12		.03					.15				*	.60			.58												.07	3.69
Millinocket	Penobscot	T.		.31	.16	.83	.16		T.				.09				.22			.55								T.		.07			2.39
North Bridgeton	Saco		.62		3.28							.24				.98				.50												.10	5.72
Orono	Penobscot		.30		.50		.70																				.20					.10	2.70
Oquossoc	Androscoggin		.04	.30	1.06	1.20	.24					.04	.05				.06			.57							.12					.04	3.72
Patten	Penobscot		.50	.02	.60	.22	.16					.09	.08							.61													2.28
Portland	Coast		.72		.53		T.	T.			.02	.59				.20			.03	.66												.04	2.79
Presque Isle	St. John				.15	.15	.15					.10	.05							.33													0.93
Rumford Falls	Androscoggin		T.		2.18		T.				.25	.02				.48			.18	.23												.15	3.51
The Forks	Kennebec		.20		T.		.15				.30	.25				.20			.45	.10											.20		1.85
Winslow	do			.05	3.25					.11		.73				.38	.10			.65							.15					.10	5.52
New Hampshire.																																	
Alstead Center	Connecticut		.12		1.22	.07					.22	.25					.01			.38												.02	2.29
Benton	do		.38		2.00	.02	.01	.02			.44	.01				1.08			.50												.48	4.94
Bethlehem	do		.26		3.02		T.	.05			.24	.20				.79	.31		T.	.46						.23					.16	5.72
Brookline	Merrimac		.10	.25	1.00			.02			.65	.15								.45						T.						2.62
Concord	do		.06		.36			.02			.24	.03				.04	.01		.02	.71											T.	1.49
Durham	Coast		.58	.04	1.44		.01					.56			.02					.37													3.02
Franklin	Merrimac		.32	.02	.50	.13	T.				.17	.20				.08	1.99			.90												.03	4.34
Grafton	do		.07		1.65			T.			.16	.48				.55				.70												.15	3.76
Hanover	Connecticut		.17	T.	2.94			T.	T.			.45	T.	T.	T.	T.				.08		T.	T.		T.	T.		T.	T.	T.	T.	.27	3.91
Keene	do		.01	T.	.78						.13	.24								.25												T.	1.41
Nashua	Merrimac																																
Newton	do		T.	.07	1.04		T.				T.	.68					.16			.52												T.	2.47
Plymouth	do		.13		2.35	.12					.18	T.					.63	T.		.30												.08	3.79
Vermont.																																	
Bloomfield	Connecticut	.02	1.45		.58	.05	.12	.01			.17	.26	.01			.25				.41							.14					.25	3.72
Cavendish	do	T.	T.		1.30		.10	T.			.27	.16				.82	.17			.86												T.	3.68
Chelsea	do	.04	.20		1.50			T.			.20	.35				.45			T.	.12												.10	2.96
Jacksonville	do				.90						1.00	T.																			.05	.05	2.00
Manchester	Hudson		.71		.86		T.				.68									1.12							T.					T.	3.37
St. Johnsbury	Connecticut	T.	.04		.96	.07	.06	.03			.11	.92	.20			1.00	.29		T.	.35							.40					.10	4.53
Vernon	do		.02	.03	1.00						.45									.49	.07											.07	2.13
Woodstock	do		T.		2.22						.47	.18			.62					.22												.41	4.12
Massachusetts.																																	
Amherst	Connecticut		.05		1.72	.03					1.02	.22							.11	.88							T.						4.03
Ashland	Merrimac		.01		.33						*	1.59					.10			.53							.29			.01			2.86
Bakers Bridge	do				.33	.27						.51	.21							.67							T.						1.99
Bedford	do		.06		.51	.19	T.	T.		T.	.02	.55				.10	.02			.72							T.						2.17
Blue Hill	Coast				.06	.05					.01	.35	.02			T.	.01	T.		.36							.01		T.	.18			1.05
Boston	do		.01		.02						T.	.41				.01	.02			.43							.08			T.			0.98
Chestnut Hill	do				.13						.19	.09							.50	.03							.24						1.18
Clinton	Merrimac		.04		.60						T.	2.69				*	.14			.58							.02						4.07
Concord	do		.04	.06	.17	.33					.01	.54	.30			T.	.10			.67							T.			T.			2.22
Fall River	Coast		.95		.17						.15	.41				.25	.45			.60							.02		.33	.33			3.66
Fitchburg	Merrimac		.01		.84	.20					.20	1.23								1.03							T.					.06	3.57
Framingham	do				.38						*	1.08					.08			.57							.13			.02			2.26
Haverhill	do		.48		.45	.20					.01	.96	.03				.04			.55												T.	2.72
Hingham	Coast		T.		T.							.60							.73								T.		.37				1.70
Hyannis	do		.01		.75							.54				*	.87			.30							.08		.06	.54	.02		3.17
Jefferson	Merrimac		.55		.54							1.72				.27	.29			.55							.06						3.98
Lake Cochituate	do				.27						*	.60				.06				.52							.13						1.58
Lawrence	do		T.	T.	.69						T.	.93					.01			1.04							T.					T.	2.67
Leominster	do		T.	.01	.82	.03					.20	2.32				T.	.04			.64							.02					.01	4.09
Lowell	do		.01		.89							1.15				.22				.94													3.21
Middleboro	Coast		T.		.14						.35	.04				.07	.16			.23							T.		*	.60			1.59
Monson	Connecticut		.02		.76	.05					.15	1.15				1.10				.75							.02						4.00
Nantucket	Coast		T.	T.	.60	.01					.02	.20				.94	.45			.12							.03		.13	.17			2.67
New Bedford	do		.05		.05							.27				*	.98			.36								*	.30				2.01
Norfolk	do		T.		T.			T.				.08				.14			T.	.28				T.						.33			0.83
Northampton	Connecticut		.05		1.45						1.28									.74							T.						3.52
Plymouth	Coast				.38							.54					.69			*	.22						T.			.73			2.56
Princeton	Merrimac		.07		*	.64					*	1.88					.15			.61							.10						3.45
Provincetown	Coast					1.08						1.42					.96			.15							.08		.73				4.42
Rockport	do					.10						1.02					.13			1.00													2.45
Rutland	Connecticut		.71	T.	.60						*	1.92				.15			.70							.15						4.23
Somerset	Coast		.42		.27						.64	.04				*	.39			.33							T.		.71				2.80
South Egremont	Housatonic	.08	.27		1.28			.04			1.00								1.48														4.15
Spot Pond	Coast		.02		.15						.24	.06				.02			.61	.09													1.19
Sterling	Merrimac		.06		.52						1.54	.89					.05			.66							19						3.91
Taunton	Coast		T.		.15			T.			*	1.11				*	.16			.26							T.		*	.62			2.30
Turners Falls	Connecticut		T.	.10	.65							.58								.35							T.						1.63
Westboro	Merrimac		.02		*	.61					*	1.55				*	.86			.56							.18						3.78
Williamstown	Hudson				.80		T.				.80	.14							T.	.27							T.					T.	2.01
Winchendon	Connecticut		.20	.11	.78	.14					.20	1.27								.48												T.	3.18
Worcester	Coast		.71	T.	.68						.18	.79				.61	.04		T.	.52							.08						3.61
Rhode Island.																																	
Block Island	Coast		.13		.02						.22					1.28	.15			.37							.04		.09	.04			2.34
Bristol	do		T.		.13						*	.47				*	.84	.04		.54							.02		*	.54			2.58
Greene	do				.36						.47						1.35			.19							.07		*	.58			3.02
Hope Valley	do		.22		.25						T.	.60				.03	1.12	.01		.40					.18				.05	.41			3.27
Kingston	do		.13		.05						T.	.36				.15	1.00			.72							.60		.05	.90			3.96
Narragansett Pier	do		.12		.11						T.	.33				.11	.73	.02		.38							.33		.02	.41			2.58
Pawtucket	do		.30		.26					T.	*	.41				*	.49			.27							.03		*	.57			2.33
Providence	do		.64		.03					.06	.09	.29				.02	.49			.34							.01		.47	.18			2.62
Wallum Lake	do		.20	.02	.14						.20					.16	.05		.01	.45										.54			1.77
Connecticut.																																	
Bridgeport	Coast		.39		.02				T.	.17	.37	.96				T.	.02			.17							.03		.01	.18			2.32
Canton	Connecticut		.10		.42							2.52					T.		T.	.61									.03				3.68
Colchester	Coast		.29		.12					.01	T.	.27					.08			.40							.13		T.	.64			1.94
Cream Hill	Housatonic		.26	.38	1.55				T.		2.00	.36							.02	.67													5.24
Danielson	Coast		.07			.15						.10					.10			.30							.03			.62			1.37
Falls Village	Housatonic		.20		1.76				.04		2.32								.08	.59							.01						5.00

TABLE 2.—*Daily precipitation for August, 1910. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Connecticut—Cont'd.																																	
Hartford	Connecticut		.12		.73	T.			.01	.14	1.11	.44				.02	T.		T.	.30							T.		.08	.03			2.98
Hawleyville	Housatonic		.69			1.25				.11	.23	1.45								.49							.37						4.59
Lake Konomoc	Coast			.47		.10						.25					.65			.30										.36			2.13
New Haven	...do		.82		.01				.11	.93	.56	.25				.02	.01			.24							.01		.11	.14			3.21
New London	...do				.12							.32			.22	.31				.76							.11			.31			2.15
North Grosvenordale	...do		T.		.12						.52									.24										.44			1.32
Norwalk	...do		.11								.64	.20					.09			.18							.03		*	.11			1.36
Southington	...do		.40	T.	T.	.40			T.	.30	.10	1.40					T.			.25									.20				3.05
South Manchester	Connecticut										1.45									.35													1.80
Storrs	Coast		.05		.62						.62									.47									.23				1.99
Voluntown	...do		.19		.11						T.	.30					1.20			.86							.15		.17	.23			3.21
Wallingford	...do		.70		T.				.27		1.22				T.	T.			.30								.40		.17				3.06
Waterbury	Housatonic		.61		.20					.35	*	1.35				T.			T.	.45							.05			.15			3.16
West Simsbury	Connecticut		.09		.44					.21	*	1.71				.67			*	.77										T.			3.89
New York.																																	
Addison	Susquehanna		.09	T.	T.	T.			.08		.66				.14	.01	.02		.26	.29			T.				.52						2.07
Albany	Hudson		.04		.37		T.				.54								.38	.04							T.					.01	1.38
Alfred	Susquehanna	.03		.03	T.						.93					.14			.23	.19			.20				.70					.10	2.55
Amsterdam	Mohawk		.22		.24		.03				.24						.02		T.	.28							.03					.30	1.36
Athens	Hudson		.03	.02	.88					T.	1.32	.28							T.	.82							T.						3.35
Ballston Lake	...do		.23		.04						.27	.17			T.				T.	.21							T.					.16	1.68
Bedford	Coast		.57	.02		.04	.01			.16	.76	.07				.12			.01	.30										.38			2.44
Binghamton	Susquehanna	T.			T.				.14		.46								.21	.5							.24						1.10
Bouckville	...do		.45	.29	.51						.95					.04			.10	.45							.30					.26	3.35
Carmel	Hudson		.30		.20					.69		1.71								.35										.20			3.48
Chatham	...do		T.		.88	.10				.02	*	1.24								.70							.03						2.97
Cooperstown	Susquehanna		.25		.46					.05	.72	.02							.50								.10					.24	2.34
Corinth	Hudson				1.00						.42	1.00								.25													.65	3.32
Cortland	Susquehanna		.30		.05						.36									.42							.46						1.59
Cutchogue	Coast		.11		.25					T.	T.	.80				.05	.41	.04		.60							.16			.06			2.48
De Ruyter	Susquehanna		.63	.12	.16	.03	T.				.50					.90			.19	.10							.43					.49	3.55
Easton	Hudson		.26		1.65					*	1.54																						3.45
Elmira	Susquehanna	.06			.11						.60								.22							.61							1.60
Fort Hunter	Mohawk																																
Fort Plain	...do		.27	.02	.36		T.				.38	.16			T.				T.	.32							.10					.36	1.97
Glens Falls	Hudson		T.		2.37					.04	.30	1.65								.36													4.72
Gloversville	Mohawk		.15		.12		T.			T.	.46	T.	.04							.24							T.					T.	1.01
Greenfield Center	Hudson		.06	.04	.65						.35	.94								.80													2.84
Greenwich	...do		.17	T.	.84			T.		T.	.26	.85	.04							.54													2.70
Griffin Corners	Delaware																																
Haskinville	Susquehanna										1.35				T.	T.			.45	.18			.30				.57					T.	2.85
Homer	...do	T.	.21	T.	T.	.01	T.		T.		.83								.32	.04					T.		.65					.25	2.31
Hoosick Falls	Hudson		.12			1.15						.61	.16							.28							T.						2.32
Indian Lake	...do				2.00		.24				2.00								.60	.40							.20					.20	5.64
Jeffersonville	Delaware		.07		.35				.34	T.	1.30								T.	.52							.05						2.63
Lake Pleasant	Hudson			2.30	.20		.10				.50	.80					.50			.20							.20						4.80
Liberty	Delaware			.20							.25							.10		.45							.04						1.04
Little Falls	Mohawk		.30		.93		.15				.83								.05	.30							.35					.13	3.04
Mohonk Lake	Hudson		.22	.17	.55	.17	.34			3.54	.75									.65					T.								6.39
Morehouseville	Mohawk		.70		2.40		.50			1.25	.20								.10	.42				.05			.30					.10	6.02
Mount Hope	Coast			.18					.20		.25	.60			T.	T.				.40							T.						1.63
Newark Valley	Susquehanna		.02		T.				.06		.60								.10	.12							.32						1.22
New Berlin	...do		.38			.42					.05	.91	.05			.03				.53							.17						2.54
New Lisbon	...do		.43		.14				.01		.74					.02			.06	.58							.13					.45	2.56
New York City	Coast		T.	.18	.05				.07	.73	.52					.13	.15	T.	.03	.12							.02		.04	.09			2.13
North Creek	Hudson				2.90		.05				.62	.10					.16										.06					.85	4.74
Northville	...do	.10		.14	.59						.76								.44													.43	2.46
Norwich	Susquehanna		.34		.08	.07					.35	.90				.27				.55							.12						2.68
Oneonta	...do	.03								T.	.50	.14			.19				.12	.30							.08					.10	1.46
Oxford	...do		.11	T.	T.						1.44	T.							.41								.18						2.14
Port Jervis	Delaware	.89		.20		.60	.37			.27	.22	.08	.37	1.10	.45										.01				.17				4.73
Salisbury	Mohawk		.25		.10		.20				1.25	.08							.14	.36							.41					.12	2.91
Salisbury Mills	Hudson		.12			.25						1.45								.30										.20			2.32
Scarsdale	Coast		T.	T.					.10	.12	.80					.10	.10										.30		*	.25			1.77
Setauket	...do		.04		T.				T.	.14	.13	.15				.10	.12			.08							.02		.04	.07			0.89
Sherburne	Susquehanna				.16						.72				.98				.44							.25					.54	3.09
Southampton	Coast	.01		.07						.01	T.	.22				.10	.37	.01		.25							.21		T.	.22			1.47
Spier Falls	Hudson	T.	T.		2.31			T.			.26	1.11								.25													2.93
Trenton Falls	Mohawk		.05		.60	.54	.10				.36	1.37								.81							.37					*	4.20
Tribeshill	...do		.20		.20		.10				.40									.40												.10	1.40
Utica	...do		.24			.40	.14				.20	.87								.55							.55					*	2.95
Wading River	Coast		.28	.02	.01				.01	.07		1.29				.12	.03			.04							.08		T.	.03		T.	1.98
Wappingers Falls	Hudson		1.12	T.	.62	1.16			.45	.12	2.06	.28					T.													.12			5.93
Warwick	...do		.36			.20			.28		.50									.25									.23				1.82
Waverly	Susquehanna				.14				.20		.35	.01							.12	.13							.28						1.23
West Berne	Mohawk				.72						.18	.29								.33							T.					T.	1.52
West Point	Hudson		.16		.15				.10	.10	1.65						.10			.20							.05		.30				2.81
Windham	Mohawk				.88						.58								T.	.80							.06						2.32
Pennsylvania.																																	
Altoona	Susquehanna					.03			.02		.60	.07								1.20			.18				T.						2.10
Ansonia	...do				.02		.05			.15	.18	.37				.02				.54							.71						2.04
Austin	...do				T.	.49				T.	1.16								.78	.22							.65						3.30
Bellefonte	...do								.80		.98		.11						.50						.05								2.44
Bethlehem	Lehigh				T.	.42			1.06		.51	.05				.46	.13			.06			T.							.09			2.78
Browers Lock	Schuylkill								1.09		.50	.70								1.02							.30						3.61
Catawissa	Susquehanna								.76		.88								.08	.25							T.					.05	2.02
Center Hall	...do								1.03		1.08	T.							.25														2.36
Clearfield	...do																																
Coatesville	Coast				.13				1.81	.01	.41					.60	.14			1.30			.05				.63	.03				.02	5.13
Doylestown	Schuylkill		.71			2.39			2.43		1.87				.10					.63									.16				8.29
Drifton	Susquehanna	T.	T.	T.	.04				.90	.04	1.20								.77				T.										2.95
Emporium	...do				T.				T.	T.	.78	.09			T.	T.			.33	.12			T.				.65						1.97
Ephrata	...do			.42	.30				1.58	.32	.52					.27	.05			1.13			.02										4.61
Everett	Juniata								.38		.10		.18							.92		T.	T.	T.							T.		1.58
Forks of Neshaminy	Delaware		.25			1.35			1.15	.05	1.99	.35				.22			.04	.58							.33		.15				6.46
George School	...do		.47	.06	1.13				.63	.38	1.03	.14				.37	.21	.01		.43							.38		.13				5.37
Gettysburg	Potomac			.02					.66		.08	T.				.21	T.		T.	.52							.02						1.51
Girardville	Susquehanna	T.	T.		.12				1.12	.12	1.04					T.	T.		.22	.20					T.							.50	3.32
Gordon	...do				1.49				.73	.40	.96	.03								.51													4.12
Hamburg	Schuylkill				1.12				.73							.29	.27																2.41
Hanover	Susquehanna			.01	T.				.80		.08		.03			.62	.02	.02		1.37							.13			T.		.17	3.25
Harrisburg	...do			T.	.02				.75	.02	.66					.18	T.	T.	.12	.11			T.				.03					.32	2.21
Huntingdon	Juniata				T.				.76		.64	.10							.68	1.06												T.	3.24
Hyndman	Potomac			T.	T.				.24		.15						T.		.50	.60		.20					T.					.90	2.59

TABLE 2.—*Daily precipitation for August, 1910. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania—Cont'd.																																	
Kennett Square	Coast				.24				2.63		1.45				1.54	.55	.24	T.	T.	.54				T.	T.		.39		.14			.25	7.97
Lancaster	Susquehanna								2.13	.42	.53					.47				.70							.29		.02			.47	5.03
Lansdale	Schuylkill			.46		.64			1.87		1.72	.04			.36	.05				.58									.27				5.99
Lawrenceville	Susquehanna		.10		.10				.20		.45				.50				.35								.60						2.30
Lebanon	do				T.				1.20	.30	T.	T.				.92	T.	T.		.42			.10							T.			2.94
Le Roy	do		.01		.16				.45		.62	.01							.80	.25							.51						2.81
Lewisburg	do				.02				.81	.05	.54	.02	.06							.30													1.80
Lloyd	do																																
Lock Haven	do				T.			.59			.80								.37						.17							1.93
Marion	Potomac				.33				.50		.22	.26															.10						1.41
Mauch Chunk	Delaware		.19		.58				.62	.05	1.66	.24				.09				.48									.09				4.00
Mifflintown	Juniata				.14				.90		.78									.58													2.40
Milford	Delaware		T.		.22	.53		.28	1.21		.95	.85				.05	.22	.22	T.	.09							T.			.14			4.76
Montrose	Susquehanna				T.				.26		.58	.15							T.	.60							.12						1.71
Mountain House	Juniata								.28		.15	.43	.07							.56							.05						1.54
Muncy Valley	Susquehanna		T.						.56		.72								1.36								.09						2.73
New Germantown	do								1.00		.10									.38			.05										1.53
Ottsville	Delaware			.26	.48				1.76		2.44					.14	.24			.09							.07		.07	.05			5.60
Philadelphia (1)	do				.76				.93	.01	.42				.29	1.02	.03	.01		1.72							.36		.15			.02	5.72
Pocono Lake	do																																
Point Pleasant	do			.18	.68	.06			1.29		1.29					.56	.33			.11							.12		.10				4.72
Pottsville	Schuylkill				.64				1.56		.48					.04			.23	.11									.04				3.10
Reading	do				.10				1.02		.51					.75			.13	.31		.02							.02			.04	2.90
Renova‖	Susquehanna								T.	.68	T.	.78								.48							.58						2.52
Scranton	do				.31				.30		.94								.45	.48							.03						2.51
Seisholtzville	Schuylkill			1.91	1.55				1.87	.09	.81					.18	.03			.13			.13						.01				6.71
Selinsgrove	Susquehanna				.02				.57	.11	.73	.67								.47							.02						2.59
Shawmont	Schuylkill				.03	1.40			1.65	.05	1.65	.45				.40	1.10			3.04							.35		.25				10.37
Shippensburg	Susquehanna																																
Smiths Corners	Schuylkill			.26	.84				1.66	.33	1.09					.22	.26			.14									.19				4.99
Spring Mount	do			.58	.19	.18			1.93	.14	1.13					.38	.37			.46							.07		.07				5.50
State College	Susquehanna				T.				.66	.02	.78	.02							.37	.22							T.					T.	2.07
Towanda	do				T.				.32		.94								.46	.13							.23						2.08
Wellsboro	do				.03				.36		.46				T.				1.04	.22							.36						2.47
West Chester	Coast				.19				1.59	.02	1.63				.06	1.12	.36	.03		.96							.41		.09				6.46
Wilkes-Barre‖	Susquehanna			.12	T.					1.02	T.	.98									.72						.01						2.85
Williamsport	do								.35		.67								.47														1.49
New Jersey.																																	
Asbury Park	Coast		.02	T.	T.				.06	1.32	.43				T.	.17	1.28	T.	.06	.63							.83		.17				4.97
Atlantic City	do		T.		T.				T.	T.	T.				T.	.56	T.	.04		1.02							.18		.04	T.			1.84
Bayonne	do		T.	.49	.06				.10	.06	.42					.20	.07	T.	.01	.21							.03		.08	.10			1.83
Belvidere	Delaware			.25					.89		.44					.89				.30									*	.30			3.07
Bergen Point	Coast		T.	.30	.20				.30	.03	.59					.19	.30			.34							.07		.11	.10			2.53
Boonton‖	Passaic*			.25	.53	.06				.22	T.	1.32					.06	.14		.23*										.12			2.93
Bridgeton	Coast		2.15		.35				.10	.05	.05	.05			T.	.33	1.15		.30	.40							.25		.25				5.43
Burlington‖	Delaware				.86				.86		1.14				.14	.08	.02			.06							.43		.05			.52	5.36
Canton	Coast			.22		.21			.16		.16				T.	*	2.06		T.	.17							.22		.21				3.41
Cape May City	do		.30		.02				.03		.08				.02	.36	.07	.08		1.67							1.08	.02	.11	.06			3.90
Charlotteburg	Passaic			.28	.10				.18		1.60					.22				.31									*	.18			2.87
Chatham‖	do			.75	1.05	.15				.15		1.10				.10	.25	.05		.15	.08						T.	.04		.15	.05			4.07
Clayton	Coast		.22		.01					.35	.03						1.23		T.	.71							.68		.06	.10			3.39
College Farm	do			3.02	.22				.15	.08	1.48					.19	.61	.07	.02	.13							.19		.13	T.	T.		6.29
Culvers Lake	Delaware		T.		.02				.50		.80					.80				.40										.09			2.61
Dover	Passaic		.30	.31	.08				.25		1.59					.30	.02			.25									.10				3.20
Elizabeth	Coast		.04	.48	.06				.08		.30					.28	.04			.24							.04		*	.23			1.79
Flemington	do			.78	.18				.65		1.26					.61	.03	.06	T.	.05							.06		.12	.02			3.82
Haddonfield	Delaware				.77				1.37	.43	.02					1.01	2.31	.32		1.92							.22		.09	T.			8.46
Hammonton	Coast		.13		.09				T.	.60					T.	.80	1.39			.96							.91		.03				4.91
Hightstown	Delaware		.36		.71				.83		1.53					.44	.28			.29							.55		.10				5.09
Imlaystown	do																																
Indian Mills	Coast		.12		.20				.10	.81	T.				T.	.46	.83	T.	.05	1.07							1.18		.03	T.			4.85
Jersey City	do		.01	.31	.02				.06	.03	.73					.18	.08	T.	.02	.17							.02		T.	.18			1.81
Lakewood	do																																
Lambertville	Delaware			.34	1.03				1.21		1.06					*	.22			.22							.16		.15				4.39
Layton	do				.90				.55		.69					.51													*	.25			2.90
Little Falls	Passaic		T.	.25	.09				.18	T.	.80					.19	.09		T.	.32									.05	.05			2.02
Long Branch	Coast			.18	.10				.15	.18	.86					.14	1.52	T.	T.	.24							.40			T.			3.77
Mahwah‖	Passaic																																
Moorestown	Delaware			T.	.90				.61	.09	.83				T.	1.65	.12	T.	T.	1.50							.35		.03	T.			6.08
Newark	Passaic		.05	.29	T.				.01	.60	1.15	T.				.22	T.	T.	T.	.28						.01	.01		.05	.06			2.73
New Brunswick	Coast		1.25	.20	.28						.87					.10	.46			.15							.18		.15				3.64
Newton	Delaware			.55	.11				.36		.78					.51				.50									*	.10			2.91
Northfield	Coast		.01		T.						T.				.01	.71	.16	.04		1.09							.24		.09	.06			2.41
Paterson	Passaic			.05	.16				.19		.90					.07	T.		T.	.27									T.	.12			1.76
Phillipsburg	Delaware		T.	.07	.56				.87		.57					.22	.19		T.	.10			.01						.11	.10		.04	2.84
Plainfield	Coast		.84	1.91	.20				.13	.25	.53					.50	.04			.28							.10		.11	.05			4.94
Pleasantville	do				.05					.03	.11					1.66		.04		.99							.19		.06	.04			3.17
Pompton Plains‖	Passaic			.03	.05	.07				.16		1.54				T.	.21			.27	.02									.24			2.59
Rancocas	Delaware		T.	T.	1.03				.63		.93				T.	1.12	.01		T.	1.28							.28		.02	T.			5.30
Rivervale	Coast																																
Somerville	do		1.42	1.20	.54				.30	.10	.72					.43	.13	.01		.18									.22				5.25
South Orange	do																																
Sussex	Hudson				.31				.48		.97					.16				.40									*	.20			2.52
Trenton	Delaware																																
Tuckerton	Coast		.12		.05											1.82	.30	.04		.65							1.12		.03				4.13
Vineland	do		T.		.21				.03	.08					T.	1.74	.55	T.	T.	1.78							.37		.02	T.			4.78
Woodbine	do		.49		.12				T.		.04	.10			.05	2.53	.17	.05	.03	.54							.37			.05			4.54
West Virginia.																																	
Bayard	Potomac				.10				.15		.05	T.	T.					T.	T.	.16		.02					.10					.63	1.21
Burlington	do			.32	.10				.32		T.							.30			.40						.10					1.30	2.84
Franklin	do						.92					.45								1.20												.75	3.32
Harpers Ferry‖	do					.90					T.						T.	T.	T.														0.90
Lost City	do																																
Martinsburg	do				T.				.14		T.					.15		.05	T.	.37												.35	1.06
Moorefield	do			T.	T.	T.				.25		T.	T.			T.	T.	.09	T.	.25		T.			T.							.25	0.84
Romney‖	do				.45	.10					T.	.30								.34			22			10							1.51
Upper Tract	do					T.			.45		T.											.30					T.					.41	1.16
Maryland.																																	
Annapolis	Coast									.18	.10					.90				.10	.26	.35		.40										2.03
Bachmans Valley	do			.29	.03				.55		.10					.02	.37		.09								T.					T.	1.45
Baltimore	do				.13				.49		.06				.07	.04	.19	.01	T.	.04			.10		T.		.21		.03			T.	1.37
Cambridge	do		.45						.57		.34	.35				1.64		.09									.26	.04	.20	.04			3.98
Cheltenham	do		.08						.27	.01	.03	.23				.02	.02	.26	.10	.07							.09						1.69
Chestertown	do				.07				.05	.95						.53	1.60	.05	.23	.23							.32		.15	.03			4.12

TABLE 2.—*Daily precipitation for August, 1910. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maryland—Cont'd.																																	
Chewsville	Potomac				.01				.33		.05	T.				.30	T.	T.	.01	.12							.06				T.	.35	1.23
Clear Spring	do			T.	.67	.10			.09	.02		.25			.11		T.	.03	.04	.39							.05						1.75
Coleman	do		T.		.36				1.40		.13				.55	T.	.40	T.	T.	.15		T.					.31		.18				3.48
College Park	do				.07				.30	.02	.02	.37					.45	.04	T.	.01		.01					.30			T.			1.59
Cumberland	do				T.	.03			.40	T.	.03	.06	.02							.50			.30					T.					1.34
Darlington	Coast				.05				.56		.11					.96	.30			.01							T.		T.				1.99
Denton	do		.14		T.	.42			.05		.23					1.09	1.30	.06		T.							.78		.61			T.	4.68
Easton	do		.10		.02						.56	.06				.85	1.10	.04	.02	.03							.81		.22	.01			3.82
Emmitsburg	Potomac																																
Fallston	Coast		T.	T.	.10	.04			.24	.03	.06					1.20	.64	T.	T.	.04		T.	T.				.13		.01			T.	2.49
Frederick	Potomac				.08				.30		.03						.01	.02	T.	.10							T.			T.			0.54
Frostburg	do				.05				.29	.18							.03	.01	.03	.63		.07					.01					.34	1.64
Great Falls	do					.03				.35		.43					.13	.18	.11									.11					1.34
Green Spring Furnace	do			.07	.48				.10			.05		.07						.82												T.	1.59
Keedysville	do				.02				.27		.02	.01				.47	T.	T.		.20							.02					.05	1.06
Lake Montebello	Coast				.10	.59			.34		.06					.16	.14	.01	T.	.02			T.				.20		T.	.01	T.	T.	1.63
La Plata	do																																
Laurel	do				.07				.38		T.					.52	.50	.18	T.								.29					T.	1.94
Monrovia	Potomac				.12				1.43		.03					.03	.10			.05							.02			.03		.03	1.84
Pocomoke City	Coast		.40	.44	.32					1.62		1.75			.37	.04	1.72	.38		.28					T.		.48	.12	1.25	.06			9.23
Porto Bello	do		.55						T.							.70	1.05	T.									.45						2.75
Princess Anne	do		1.18		.05				.46	.16	7.19				.27	.58	.88	.39	.05	T.							.08		.41	.03			12.63
Rockville	Potomac																																
Salisbury	Coast		.56		1.52				T.	.20	.88	.53			.68	.79	1.16	.32	.12	.13							.68	.02	.65	.05			8.29
Sanatorium	Potomac			T.	T.				.51		.08	.41				.24	T.	.19	.12	.24							.18		T.	T.	T.	T.	1.87
Solomons	Coast		2.21		T.				.45		.47		.22		.04	.16	.69	T.	.01								.21		.05	T.		.05	4.56
Sudlersville	do		T.		.13	.01			.04	.69	.05				T.	.38	.32	.05	.11	.30		T.					.34	.05	.31	T.		T.	2.78
Takoma Park‖	do					.15				.48		.49					.33	.24		.04								.20					1.93
Taneytown	Potomac				.01				.12		.32					3.26				.23							T.					.01	3.95
Towson	Coast		T.		.03	.21			.24	T.	.07					.45	.08	.01	T.		.01		T.				.04				T.	T.	1.14
Van Bibber	do				.61				.38	.01	.36					1.52	.39	T.		.01							.31		.07				3.65
Westernport	Potomac									.15	.25	.05						.02	.03	.20												.48	1.18
Woodstock	Coast				.05	.12			.38	.09	.15					.03	.03	T.	T.	.03							.02						0.90
Delaware.																																	
Delaware City	Coast				T.	.06			.58	.42	.08				T.	.26	.51	.14	T.				T.				.48		.63	T.			3.16
Dover	do		T.		.04				T.		.17					.33	.17			.32			T.				.51		.65				2.19
Milford	do		.29			.08			.02	.05	.18	.02			.02	1.69	.02	.05	.03	.58			T.		T.			.04		.03			3.10
Millsboro	do		.03		.07				.03	.02					.22	.06	1.00	1.20		.22							.43		.62	.03			4.23
Seaford	do		.22						.04	.10					.10	1.10	.70	.07		.27			.04				.85	.38	.05				3.92
District of Columbia.																																	
Washington	Coast		T.		.10				.27		.15	.01				.02	.29	.19		.03							.18	.01	T.	T.		.01	1.26
Virginia.																																	
Culpeper	Rappahannock	1.78							.42							.02	.02		.30			.10					.38					.07	3.09
Dale Enterprise	Shenandoah	1.20			.02				.04		.03		.96			.56		.05	.04	.63		.95	T.				.09					.04	4.61
Doswell	Pamunkey	.07							.32			.21	.21	T.	.36		*	*	1.00								.20						2.37
Eastville	Coast				.20				.30	.30				.10	.36	.52	.35	2.00	1.14	.15					.23			T.	.52	.25		T.	6.42
Fredericksburg	Rappahannock		.16						1.85		1.47	.08	.01		T.	.75	.12	.18	.08	T.		.04					.43	T.	T.				5.17
Lincoln	Potomac										.48					.25	.03																0.96
Mount Weather	do		.19		.10			T.	.44		.15	T.				.52	T.	.05	.02	.03		.01					.02			.02		.36	1.91
Quantico	do		.16						2.20																		.13						2.49
Staunton	Shenandoah	1.61		T.				T.	.07		.03		T.	.06		.48		.32	T.	.26	.02	.04					.42				.01	.16	3.48
Stephens City	Potomac								.13			T.							.01	.09		.11						T.					0.34
Warsaw	Rappahannock		.16		.05				.35		.65					1.50	.50	.52	1.65				.03		T.		.36	.23	.05	.02	.10	6.17
Woodstock	Shenandoah	.09		.02	.06				.12		.02		.02			.27		.08		.16												.09	0.93

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H.		Massachusetts.						Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Presque Isle.		Rumford Falls.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	76	53	73	53	80	51	76	55	75	46	77	51	80	49	80	50	77	62	80	46	75	62	79	57	78	53	79	56
2...	66	52	70	52	79	54	74	59	77	54	75	57	80	57	81	58	81	64	78	53	76	62	77	59	74	57	78	59
3...	70	53	77	51	81	52	73	57	80	70	79	52	78	52	78	62	73	65	81	54	78	66	78	65	78	56	82	62
4...	61	54	69	55	81	56	68	64	76	64	71	62	77	64	80	64	81	68	80	70	76	66	78	68	73	52	81	67
5...	73	54	70	56	76	62	76	60	72.	58	73	54	74	58	76	55	78	66	78	58	76	66	78	64	78	54	77	63
6...	66	53	64	50	76	54	72	57	69	50	67	54	71	56	74	54	75	64	76	48	76	64	75	58	74	52	76	58
7...	71	56	88	55	74	55	73	58	74	54	73	56	76	54	80	54	78	62	79	48	75	64	79	60	78	56	78	59
8...	68	55	72	55	79	52	73	59	79	45	76	53	79	53	79	56	71	63	78	55	77	62	80	61	77	57	80	60
9...	67	54	74	49	81	53	65	56	76	55	74	56	76	52	80	61	69	61	76	58	70	58	76	60	72	56	79	63
10...	62	52	67	54	75	51	64	57	75	55	68	59	70	56	70	59	68	60	76	51	69	58	72	56	62	51	72	60
11...	59	54	60	54	70	59	64	57	67	58	74	59	74	59	82	61	68	62	72	61	77	62	72	63	74	55	82	63
12...	75	55	71	54	78	55	78	57	74	52	76	54	80	56	83	53	82	61	81	53	74	61	80	60	78	59	81	60
13...	82	56	80	54	83	50	80	56	83	44	82	49	84	49	84	52	85	63	83	49	78	63	81	58	81	57	83	56
14...	77	55	75	61	85	58	80	61	77	65	80	56	87	57	86	56	88	64	81	55	79	63	81	62	83	59	84	61
15...	74	57	71	53	84	58	73	62	77	46	70	60	82	60	80	68	84	67	80	62	74	66	80	64	80	57	80	64
16...	65	55	75	58	76	59	69	58	77	44	72	60	70	60	72	62	67	63	69	63	69	63	70	63	72	53	74	64
17...	68	54	73	44	78	46	66	55	77	42	72	52	73	54	76	56	70	61	73	62	67	59	74	57	71	56	76	59
18...	65	51	68	46	78	45	66	50	68	50	70	49	75	53	74	49	75	57	73	43	72	56	71	55	64	55	75	52
19...	64	56	68	56	71	59	75	57	70	45	72	50	76	54	79	53	74	64	75	62	72	61	76	61	72	60	79	59
20...	70	52	70	41	74	40	71	52	73	35	70	45	75	45	78	46	70	58	72	50	69	57	74	56	72	49	76	52
21...	69	51	77	44	79	45	74	53	80	50	77	46	81	45	82	47	78	58	80	42	73	57	77	57	74	60	81	57
22...	66	55	77	43	80	53	75	59	81	48	80	58	82	55	78	58	81	63	78	57	71	60	78	61	75	57	78	61
23...	66	53	77	58	80	55	73	59	80	50	80	60	83	55	80	56	81	62	77	49	72	60	75	60	80	56	80	62
24...	62	55	81	57	81	58	80	52	81	65	84	62	84	60	80	64	86	66	82	59	76	64	84	64	79	60	82	64
25...	65	53	83	64	82	62	82	67	85	66	84	65	85	66	84	66	87	70	82	65	76	68	84	68	80	62	84	68
26...	77	55	73	65	81	66	85	54	77	62	80	56	80	54	77	50	83	60	81	67	77	65	81	58	76	53	80	57
27...	65	50	68	44	75	40	67	49	77	62	71	44	75	42	75	41	67	55	73	43	67	55	72	51	75	43	74	48
28...	66	51	68	42	78	44	72	49	71	54	74	46	79	47	80	44	73	56	75	40	69	55	73	52	73	45	81	51
29...	69	52	68	53	74	52	67	53	68	42	71	50	78	49	82	56	66	58	69	55	63	59	70	55	80	52	75	59
30...	65	48	64	40	75	36	63	51	65	31	69	42	74	48	78	55	66	57	68	51	67	53	70	54	72	48	76	56
31...	65	47	63	38	70	38	63	48	65	33	66	45	68	45	74	53	73	54	69	36	67	51	70	47	71	32	74	53
Mns	68.2	53.3	71.6	51.6	77.9	52.2	72.2	56.5	75.0	51.5	74.4	53.6	77.6	53.7	78.8	55.5	76.0	61.7	76.6	53.7	72.8	60.8	76.5	59.2	75.0	54.6	78.6	59.1

Date.	New Haven, Conn.		New York.												Pennsylvania.												Asbury Park, N. J.	
			Addison.		Albany.		Binghamton.		Cooperstown.		Indian Lake.		New York.		Everett.		Harrisburg.		Philadelphia.		Scranton.		State College.		Wellsboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	78	58	83	44	79	56	78	46	76	57	69	40	80	63	84	58	83	58	83	66	78	48	78	46	81	39	75	60
2...	74	61	87	56	81	62	81	60	77	54	79	51	80	66	86	52	87	66	82	69	86	58	85	54	84	52	81	66
3...	81	61	92	57	81	60	84	58	80	57	85	44	84	69	92	56	91	69	86	69	86	61	88	50	87	52	75	65
4...	80	70	91	70	83	67	88	64	72	55	80	57	83	69	89	60	87	74	84	69	90	67	86	71	86	71	84	65
5...	79	65	77	55	76	62	71	56	68	57	70	53	79	67	83	58	81	65	82	72	77	61	74	56	75	52	82	65
6...	79	60	82	55	71	61	70	60	63	57	60	50	82	64	81	53	84	62	86	67	78	60	77	48	77	48	85	65
7...	79	60	82	51	80	62	74	59	70	54	73	54	80	65	84	47	83	61	84	69	76	60	79	53	80	48	80	60
8...	79	64	72	56	78	60	69	57	72	54	75	45	79	68	69	61	72	63	76	67	70	64	73	59	72	51	75	61
9...	75	64	81	56	81	62	76	57	70	52	80	44	75	66	81	60	79	63	78	66	80	61	77	56	77	55	73	65
10...	71	63	84	62	68	62	70	57	67	59	77	56	74	66	79	64	79	61	76	66	70	63	74	58	78	60	73	65
11...	80	63	84	54	83	60	74	54	73	61	75	53	81	64	82	55	84	63	85	66	80	60	80	58	81	53	74	64
12...	83	62	84	50	83	59	76	51	74	58	77	46	83	66	82	57	82	62	84	69	79	53	80	54	84	46	80	65
13...	81	60	92	49	85	57	82	50	80	54	79	42	82	68	81	56	83	62	82	68	84	55	81	54	85	46	76	63
14...	82	60	92	58	85	64	84	61	81	64	80	47	82	66	85	53	84	63	82	67	86	57	83	58	88	55	76	65
15...	77	67	95	58	85	66	85	56	84	65	85	55	79	72	86	65	79	68	75	70	83	61	84	58	90	56	74	70
16...	78	66	92	62	79	68	82	64	76	64	79	53	80	68	84	58	84	68	81	71	81	66	78	63	88	60	75	70
17...	76	60	84	61	78	58	72	61	79	61	75	50	76	65	81	66	71	65	72	65	73	60	75	66	78	62	74	70
18...	73	56	71	60	75	57	70	59	70	64	76	55	74	64	79	63	76	63	79	64	74	58	73	62	70	59	72	66
19...	80	64	80	56	77	60	71	53	70	59	70	54	81	68	79	66	79	66	81	69	76	56	75	64	77	57	76	67
20...	78	56	83	46	78	52	74	45	69	51	69	38	77	64	79	49	79	56	79	64	76	49	77	49	81	45	78	65
21...	79	59	89	48	83	58	77	53	77	52	80	39	79	63	81	51	77	61	80	64	80	54	79	49	83	46	74	58
22...	77	60	85	55	78	63	75	60	76	64	79	50	78	66	79	57	78	65	78	67	76	64	76	60	80	55	74	61
23...	79	61	85	58	81	62	80	62	78	64	75	57	80	67	81	61	83	65	83	66	81	64	82	60	82	57	75	62
24...	82	66	84	62	79	68	81	68	80	66	80	63	82	67	82	59	84	69	86	67	83	63	82	64	82	61	75	65
25...	84	69	93	62	86	69	84	66	84	60	79	62	85	70	88	58	87	70	86	71	82	63	84	64	85	59	84	70
26...	79	57	83	54	77	55	78	49	80	45	75	52	77	61	80	58	80	57	78	63	76	50	77	52	84	55	82	70
27...	71	50	78	41	74	47	69	40	68	38	66	35	73	57	74	42	75	49	73	57	74	44	73	42	77	40	71	58
28...	73	52	84	42	79	51	78	42	74	48	71	38	73	61	80	42	79	51	70	60	80	47	77	44	79	39	71	59
29...	74	60	84	45	80	58	74	51	71	55	72	36	75	65	80	61	81	65	74	65	80	61	80	56	81	45	70	67
30...	74	57	82	48	78	54	74	49	76	63	70	32	75	63	80	56	78	63	76	61	78	56	79	58	79	47	70	64
31...	74	55	86	62	75	61	73	62	71	63	69	50	76	64	75	59	76	61	80	61	75	61	75	59	78	60	73	66
Mns	77.7	60.8	84.5	54.6	79.2	60.0	76.6	55.8	74.4	57.3	75.4	48.4	78.8	65.5	81.5	56.8	80.8	63.0	80.0	66.3	79.0	58.2	78.7	56.3	80.9	52.6	76.0	64.6

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg, W. Va.§§		Maryland.								Millsboro, Del.		Washington, D. C.		Virginia.					
	Atlantic City.		Hightstown.		Newton.		Phillipsburg.				Baltimore.		Darlington.		Frederick.		Westernport.						Culpeper.		Fredericksburg.		Staunton.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	77	62	87	51	82	46	86	51	87	55	82	64	81	60	82	55	86	50	85	59	85	58	85	57	85	57	81	58
2...	76	66	85	59	83	55	90	57	90	60	85	69	83	65	89	63	88	53	87	68	89	70	88	62	89	65	85	62
3...	79	67	91	62	85	60	86	61	95	65	90	74	87	70	94	68	94	58	90	70	89	70	86	68	93	69	89	64
4...	75	69	89	70	85	62	90	61	92	65	88	75	85	73	91	72	88	66	88	75	90	72	89	71	88	71	85	70
5...	83	66	84	59	79	57	80	59	86	62	86	72	85	61	89	62	83	55	87	66	78	65	85	63	89	62	83	66
6...	86	66	86	56	84	54	84	56	90	63	89	70	88	57	89	63	86	54	90	62	91	62	88	61	92	60	84	60
7...	76	64	84	56	83	54	85	55	91	56	85	66	85	58	88	56	87	48	88	59	84	59	87	55	91	66	86	53
8...	74	67	80	62	79	59	75	62	72	63	76	66	.....	.....	75	66	76	62	76	66	80	68	77	69	81	67	80	64
9...	76	68	80	62	78	56	82	62	88	59	80	65	.....	.....	85	62	85	57	85	63	82	64	83	56	84	61	85	56
10...	77	69	75	59	68	60	70	64	86	59	83	70	78	65	86	68	86	68	86	68	82	60	87	64	90	63	86	61
11...	77	68	87	62	84	60	86	63	90	60	88	66	85	59	88	62	89	56	87	64	86	62	87	61	88	63	86	58
12...	78	66	86	56	86	55	87	56	88	62	83	70	83	64	86	72	84	55	83	67	82	60	81	64	84	66	82	59
13...	79	69	86	56	83	54	85	59	88	61	81	68	81	60	85	69	88	57	81	66	81	60	79	61	80	64	83	57
14...	77	69	85	57	86	53	88	57	91	60	83	67	83	60	88	68	89	54	84	63	84	62	82	61	81	65	82	59
15...	76	69	78	68	79	61	80	66	86	63	79	71	77	67	87	73	89	54	80	70	80	60	80	67	83	67	77	63
16...	80	70	81	69	84	65	83	68	89	66	82	72	82	67	87	73	88	63	82	70	82	60	83	67	81	68	82	64
17...	72	69	74	64	76	61	76	57	77	69	74	68	73	66	74	69	82	67	74	67	74	60	76	67	80	68	79	65
18...	79	69	80	56	75	53	80	55	82	65	80	66	77	63	82	67	91	66	84	67	80	60	80	65	82	67	81	65
19...	78	68	85	67	83	66	82	61	85	65	81	68	80	70	86	65	87	68	80	65	78	60	80	69	79	69	80	66
20...	74	62	80	54	81	47	82	52	84	53	80	61	78	58	83	53	86	50	82	58	78	60	82	56	82	58	81	56
21...	77	62	84	52	81	47	84	55	82	53	78	65	74	58	80	62	87	49	79	61	78	64	74	61	78	62	71	59
22...	77	70	81	57	78	55	81	62	85	59	79	66	78	61	83	66	85	67	81	61	80	60	80	60	83	60	77	60
23...	77	70	85	58	79	61	83	64	87	59	82	67	81	62	87	61	85	57	84	66	80	62	83	60	85	63	81	57
24...	78	67	87	60	87	61	84	62	89	63	86	69	84	65	90	68	88	59	86	70	84	58	85	65	86	67	84	59
25...	79	73	88	68	85	63	86	68	91	63	88	70	85	67	95	67	92	58	90	70	88	68	86	67	90	66	87	64
26...	79	64	81	64	79	61	77	53	76	66	79	64	80	65	85	67	83	49	77	64	85	64	81	64	82	62	84	70
27...	72	58	76	46	80	39	75	46	78	46	76	57	76	51	79	49	79	46	75	58	74	60	73	58	74	59	84	56
28...	76	67	69	50	83	40	79	48	86	50	74	62	70	51	87	52	86	45	77	61	80	60	82	57	77	60	82	55
29...	76	69	75	64	83	61	81	62	82	55	78	68	78	65	80	68	83	58	77	69	72	60	76	66	77	68	78	55
30...	74	68	77	55	81	51	80	58	84	62	78	62	77	59	83	61	85	60	77	63	76	64	77	66	77	66	75	66
31...	75	68	80	52	79	51	82	54	78	65	78	62	76	56	79	62	80	60	78	61	78	58	78	64	75	62	72	63
Mns	77.1	67.1	82.1	59.0	81.2	55.7	82.2	58.5	85.6	60.4	81.6	67.1	80.3[b]	62.2[b]	85.2	64.2	85.9	57.1	82.6	65.1	81.6	62.3	81.9	63.0	83.4	64.3	81.0	61.0

Climatological Data for August, 1910.

DISTRICT No. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL SUMMARY.

The moderate temperature conditions characteristic of the present summer in the South Atlantic and east Gulf States continued during August, which was the fifth consecutive month with the mean temperature for the district below the normal. The deficiency in temperature, however, was very small in the States bordering the Atlantic, increasing somewhat toward the northern limit of the district, while in the western portion, including Alabama and the Mississippi area, a moderate excess in mean temperature occurred. The rainfall for the month was irregularly distributed. Marked deficiencies in rainfall occurred in Virginia, portions of Georgia, and in Alabama and Mississippi, but a small excess was recorded in North Carolina and Florida. The heaviest rains occurred along the immediate coast from Hatteras, N. C., to Jupiter, Fla., and across central Florida, and were due to the prevailing on-shore winds, which brought abundant moisture from the Atlantic, but the effect did not extend far into the interior. The number of thunderstorms was small as compared with the preceding month, and there were very few severe local storms.

The arrangement of atmospheric pressure during the month explains the occurrence of the maximum rainfall along the eastern coast, for the district came under the influence of about 5 areas of high atmospheric pressure, which generally passed from the Lake region or Ohio Valley to the north Atlantic coast, and in the latter position caused a general drift of air from the ocean surface toward the continental interior. Such an arrangement was especially well developed and effective on August 30 and 31, when a marked area of high barometer passed from the St. Lawrence Valley to the New England coast with a pressure above 30.3 inches, causing northeast to east winds along the entire coast line and the heaviest rains for the month. The highest atmospheric pressure for the district was 30.26 inches at Lynchburg, Va., on the 30th. South of Virginia the highest pressure occurred quite generally on the 18th. A relatively small number of low pressure areas passed near the district, the most pronounced of which was the disturbance that moved from the Lake region to the St. Lawrence Valley on the 4th and 5th, with the lowest pressure 29.80 inches at Hatteras, N. C., on the 4th. The monthly range in atmospheric pressure for the district was only half an inch.

The number of bright sunny days was quite large in Georgia, Alabama, and Mississippi, and, although the temperature was not excessive and there were no very long periods of drought, the soil dried out rapidly and vegetation in some sections at times suffered from intense insolation and lack of sufficient moisture.

TEMPERATURE.

As a rule, August is a warm, oppressive month on account of the high relative humidity and small wind movement; these conditions are accentuated in Florida, where the month is even normally slightly warmer than July. During August, 1910, however, temperature conditions were quite bearable and were generally favorable for the growth of vegetation where not too dry. The average temperature for the district computed from the records at all stations was 78.6° or slightly below the July mean and 0.5° below the normal. East of the Chattahoochee River, which forms the main portion of the boundary line between Georgia and Alabama, the temperature, as a rule, was slightly below the normal, the deficiency gradually increasing toward the north to an average of 2° below normal in the Virginia area. West of the Chattahoochee the temperature was slightly above normal The daily ranges of temperature were small, the extremes were well within the limits of former years, and the dates of occurrence of the extremes fluctuated widely in different portions of the district.

Generally the warmest weather occurred during the first decade. In Virginia and North Carolina all but a few stations had temperatures above 90° on the 2d, 3d, or 4th; in South Carolina the 9th and 26th were warm days, in Georgia the 8th and 16th, in Florida the 8th and 10th, and in Mississippi the 17th. An exceptional feature in the most southern States was the fact that maximum temperatures of 100° or above occurred at relatively very few stations. The minimum temperatures reached their lowest values about the middle of each decade, that is about the 5–7th, 12–15th, and 22–23d, except in Alabama and Mississippi, where the lowest temperatures occurred on the 2d. The minimum temperature was below 60° in all States except Florida.

The highest monthly means at individual stations varied from 83.3° at Brookhaven, Miss. (closely followed by 83.1° at Key West and St. Andrews, Fla.), to 77.4° at Newport News, Va.; and the lowest monthly means from 66.1° at Hot Springs, Va., to 79.0° at Booneville, Miss. The number of places reporting monthly means above 80° was considerably greater than in July, namely, 20 stations in Mississippi, 20 in Alabama, 41 in Florida, 22 in Georgia, and 6 in South Carolina. Means below 70° occurred at but 1 station in Virginia and 1 in North Carolina. The highest temperature for the district was 102° at Blakely, Ga., on the 16th, and the lowest was 48° at Lexington, Va., on the 7th and at Hot Springs, Va., on the 26th.

PRECIPITATION.

In a few States the irregularity in the distribution of precipitation was quite noteworthy, some stations closely contiguous having monthly totals differing by more than 10 inches. The rainfall was above the normal in only 2 States, North Carolina and Florida, where the State averages were quite high, 7.34 and 8.72 inches, respectively. In Virginia, Georgia, Alabama, and the Mississippi area the state averages show deficiencies of from 1 to 2 inches. The average rainfall for the entire district was 4.93 inches and the departure −0.68 inch.

The region of excessive rains was limited almost entirely to a narrow belt of territory along the Atlantic coast from Manteo, N. C., to Jupiter, Fla., and across the central portion of the Florida Peninsula, in which belt the majority of stations received monthly totals exceeding 10 inches. This amount was recorded at 35 places (23 in Florida). The largest amounts in each State were: Belhaven, N. C., 17.67 inches; Georgetown, S. C., 11.85; St. George, Ga., 14.17; and Malabar, Fla., 16.16 inches. On the other hand, toward the interior the amount of precipitation, as a rule, rapidly diminished, though there were large amounts in the mountains of western North Carolina. In Virginia the heaviest ranis were reported in the tidewater sections of the James and Appomattox rivers, but less than 2 inches fell over the headwaters of these rivers. In Georgia the rainfall was heavy east of a line drawn north and south through the point of confluence of the Oconee and Ocmulgee rivers, while in the lower portions of the Ocmulgee, the Flint, and Chattahoochee rivers the amounts ranged from 4 to nearly 6 inches below the normal, the rainfall being the smallest for August in 20 years at nearly all stations. In Alabama the monthly rainfall averaged greatest in the Black Warrior watershed and least in the central-western portion of the State or in the Tombigbee Basin.

The greatest monthly rainfall in the district was 17.67 inches at Belhaven, N. C., and the least was 0.36 inch at Livingston, Ala., closely followed by Eastman, Ga., with 0.77 inch. Some

exceptionally heavy local rains occurred during August, of which the following are selected for record: At Belhaven, N. C., 5.84 inches fell on the 27–28th; Chimney Rock, N. C., 7.03 inches on the 30–31st; Charleston, S. C., 5.73 inches fell on the 29–30th, and at Liberty, 5.05 inches on the 31st; in Georgia, Savannah reported 8.57 inches on the 29–30th in 24 consecutive hours. At Tarpon Springs, Fla., 9.41 inches fell from 6 a. m. of the 1st to 6 p. m. of the 2d. The heaviest rains for the month generally occurred on the 29–31st.

The average number of days with rain was about 15 in Florida and North Carolina, and about 7 in Alabama and Mississippi; average for the entire district 10 days. In several States there were no days without rain at some point or other.

RIVER CONDITIONS.

The rivers throughout the district declined to very low stages toward the close of August, and the mean stages at a large number of river stations were below the normal, especially in Virginia, eastern South Carolina, Georgia, Alabama, and Mississippi. Otherwise river conditions present no features of special interest.

MISCELLANEOUS PHENOMENA.

The average number of clear days in the district ranged from 9 in Florida and Virginia to 16 in Georgia, Alabama, and Mississippi, and the largest number of cloudy days was 10 in Virginia and North Carolina. The prevailing winds were from the northeast in the 3 northern States and from the east or southeast over the remaining portions of the district. The wind movement was very light, the average hourly velocity exceeding 10 miles only at Hatteras, Charleston, and Pensacola. The highest wind velocity was 56 miles from the south at Jacksonville on the 12th.

In eastern North Carolina, especially in New Hanover, Nash, and Edgecomb counties, the heavy rains of the 29th and 31st damaged crops considerably, ruined roads, and washed away some county bridges.

At Mobile on August 12 a severe electrical storm occurred, and a man was killed by lightning while crossing an open yard.

AVERAGE STREAM FLOW OF THE CAPE FEAR, TAR, AND ROANOKE RIVERS OF EASTERN NORTH CAROLINA.[1]

The three largest rivers of eastern North Carolina are, on the south, the Cape Fear, which enters the Atlantic Ocean near Southport; on the north, the Roanoke, which drains southwestern Virginia and empties into Albemarle Sound; and between them the Tar River, a relatively insignificant stream. These rivers are not long, but they have a rapid fall, and in some parts of their course flow over impermeable rocks that lie close to the surface and greatly increase the run-off from the precipitation of the surrounding region. This is especially the case with the Cape Fear River, whose chief tributaries, the Haw and the Deep rivers, flow, in Chatham County, through a slaty broken region but thinly covered with soil that sheds water very rapidly.

These rivers sometimes undergo remarkably rapid fluctuations. A rise of 30 feet in 24 hours is not uncommon. As a striking instance it may be mentioned that the Cape Fear River in May, 1901, rose from 14 feet on the 22d to 58.5 feet on the 24th. In August, 1908, this river reached the unprecedented stage of 67.5 feet. Since the drainage areas are small, so that rains easily become general over the whole area, it sometimes happens that flood stages are attained at all the river gage stations simultaneously, as occurred on July 9, 1896, and again on May 23, 1901. An examination of the peculiar topographical features of this region fully explains the unusual range of these relatively short streams. The boundary between the Piedmont Plateau and the coastal plain is formed by the "fall line," which extends in North Carolina from Weldon on the Roanoke to near Fayetteville on the Cape Fear. It is formed by an outcrop of hard crystalline schists more difficult to erode than the strata on each side through which the rivers have cut their way and over which they flow in rapids or through narrow rocky gorges. Above the fall line the rivers have eroded wide and deep channels in which an immense volume of water collects during floods that can only escape through the narrow gorges described. The Cape Fear River during floods is several miles wide in Harnett County, while at Fayetteville the entire mass of water must flow through a channel from 150 to 200 feet wide and 60 to 100 feet deep before it can spread out over the low region of the coastal plain. For a more extended discussion of the conditions affecting the flow of these streams reference is made to the Proceedings of the Second Convention of Weather Bureau Officials in Milwaukee, 1901, pages 158–167.

Stages of the rivers have been recorded at two points on the Cape Fear, namely, Moncure and Fayetteville, at two on the Tar, Tarboro and Greenville, and at four on the Roanoke and its tributaries, namely, Randolph, Clarksville, Danville, and Weldon. The records are perhaps of sufficient length to enable an estimate to be made of the normal stream flow for the use of engineers, and to aid in studying the effect of a given amount of rainfall, as compared with the normal precipitation over the watershed, which is also given.

Mean stages of the Roanoke River.

RANDOLPH, VA.

This station is on the Staunton River, 26 miles from its mouth. Drainage area above the station, 3,086 square miles. Length of record, 5 years. Flood stage, 28 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7.8	7.1	6.8	6.9	6.7	6.9	5.8	6.3	5.2	5.9	5.3	5.2

DANVILLE, VA.

This station is on the Dan River, 55 miles above the confluence of the Dan and Staunton, which form the Roanoke. Drainage area above the station, 1,900 square miles. Length of record, 18 years. Flood stage, 8 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
0.9	0.7	0.7	0.5	0.5	0.5	0.4	0.5	0.3	0.3	0.1	0.5

CLARKSVILLE, VA.

On the Roanoke River at the junction of the Dan and Staunton, 196 miles from the mouth and 67 miles above Weldon. Drainage area above the station, 7,344 square miles. Length of record, 18 years. Flood stage, 12 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2.9	3.5	3.4	3.0	2.8	2.4	2.1	2.2	1.7	1.6	1.5	2.2

WELDON, N. C.

This station is 129 miles above the mouth of the river. Drainage area above the station, 8,180 square miles. Length of record, 11 years. Flood stage, 30 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
14.4	15.2	15.4	14.4	12.3	12.7	11.1	12.9	10.3	10.2	10.1	11.9

Normal precipitation over the Roanoke Basin.[1]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3.12	3.96	3.85	3.10	4.14	4.11	4.82	4.26	3.25	3.05	2.36	3.22

[1] Computed from the normal precipitation at Blacksburg, Rocky Mount, Salem, Bedford City, Roanoke, Danville, Saxe, Clarksville, Littleton, and Weldon.

It is noticeable at once that the winter period of maximum precipitation is much less pronounced than in the Gulf States, nevertheless the rivers maintain the highest average stages during the four months from January to April, inclusive. This results simply from the fact that the precipitation of winter is more general, the condition of the ground less favorable for taking it up than in summer, while the amount of evaporation

[1] Tables furnished by Mr. Lee A. Denson, Section Director, Raleigh, N. C.

is also much less. The heavier but more local rains of summer have a comparatively slight influence. The lowest stages occur in October and November, and are coincident with the period of minimum rainfall. The Roanoke at Weldon on the average is 5 feet lower in November than in March.

Mean stages of the Cape Fear River.

MONCURE, N. C.

This station is on the Haw River, 2 miles above its junction with the Cape Fear and 171 miles from the mouth of the latter. Drainage area above the station, 1,649 square miles. Length of record, 5 years. Flood stage, 25 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
8.8	9.2	8.5	8.2	7.4	7.0	6.5	8.0	4.9	7.6	8.0	9.0

FAYETTEVILLE, N. C.

This station is 112 miles from the mouth of the Cape Fear. Drainage area above station, 4,493 square miles. Length of record, 17 years. Flood stage, 38 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
10.3	14.7	13.2	11.0	8.0	6.5	6.9	9.1	6.3	4.6	5.0	8.0

Normal precipitation over the Cape Fear Basin.[1]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3.60	4.38	4.34	3.63	4.26	4.31	5.58	5.78	3.78	3.06	2.75	3.60

[1] Computed from the normal rainfall at Greensboro, Chapel Hill, Pittsboro, Ramseur, Moncure, and Fayetteville.

Mean stages of the Tar River.

TARBORO, N. C.

This station is 46 miles from the mouth of the river and 25 miles above Greenville. Drainage area above the station, 2,290 square miles. Length of record, 5 years. Flood stage, 25 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
8.4	8.4	9.2	7.4	5.4	5.9	4.9	7.5	4.5	2.3	3.0	5.4

GREENVILLE, N. C.

Located 21 miles from the mouth of the Tar at Pamlico River. Drainage area above station, 2,678 square miles. Length of record, 5 years. Flood stage, 13 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
8.8	9.1	9.7	8.0	6.6	6.9	6.4	7.9	5.9	4.0	4.4	6.3

Normal precipitation over the Tar River Basin.[1]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3.30	4.32	4.20	3.57	4.13	4.33	6.05	6.22	3.68	3.12	2.57	3.55

[1] Determined from the normal rainfall at Henderson, Louisburg, Nashville, Tarboro, and Greenville.

Maximum and minimum river stages.

Station.	Maximum stage.		Minimum stage.	
	Height.	Date.	Height.	Date.
Roanoke River.	*Feet.*		*Feet.*	
Randolph, Va.	25.7	Oct. 21, 1906.	3.0	Sept. 5, 6, 7, 1909.
Danville, Va.	13.1	Mar. 20, 1899.	− 0.6	Oct. 20, 31, Nov. 12, 1904.
Clarksville, Va.	27.0	Nov. 26, 1877.	− 0.7	Oct. 9, 10, 1905.
Weldon, N. C.	60.3	Nov. 26, 1877.	6.8	Jan. 2, 1900.
Cape Fear River.				
Fayetteville, N. C.	67.5	Aug. 29, 1908.	0.2	Oct. 8, 9, 1897.
Moncure, N. C.	25.9	Feb. 8, 1899.	0.2	Sept. 2, 1907.
Tar River.				
Tarboro, N. C.	28.0	Sept. 1, 1908.	− 0.6	Oct. 2, 1897.
Greenville, N. C.	22.3	Nov. 7, 1887.	2.8	Nov. 29, 30, 1907.

The average annual precipitation in the Basin of the Cape Fear River is about 7 inches greater than in the Roanoke, and the late winter or early spring maximum is more pronounced as well as the summer maximum. The highest average stage in the Cape Fear occurs in February and the lowest in October, the range being much greater than for the Roanoke. (February 14.7, October 4.6, range 10.1 feet.) As a rule, however, flood stages are more frequent in the Roanoke than in the Cape Fear.

The course of the Tar River is similar to that of the Cape Fear and the rainfall over its basin practically the same. It will be sufficient, therefore, to give the tabular matter without further comment.

STREAM FLOW OF THE PEARL AND PASCAGOULA RIVERS IN MISSISSIPPI.[1]

By FRANK MONTGOMERY, Observer, Meridian, Miss.

The drainage areas of the Pearl and Pascagoula river systems cover 15,718 square miles, embracing about three-fourths of southern Mississippi. The northern limit of the basin of the Pearl River is in east-central Mississippi, at latitude 33° 25′. The length of this river is 342 miles, and its drainage area is 8,024 square miles. It flows southward through the upper 115 miles of its course to a point about 15 miles below Jackson, and from there on it flows slightly east of southward, and the lower 85 miles of its course forms the boundary between extreme eastern Louisiana and Mississippi. The river is navigable to Jackson. The Pascagoula River flows southward into Pascagoula Bay. It is 78 miles in length, being formed by the confluence of the Chichasawhay and Leaf rivers. The total drainage area of the system is 7,694 square miles. The Chickasawhay drains 2,781 square miles. Its basin extends as far northward as latitude 32° 45′ at a point about 30 miles from the Alabama line. The general course of this river is southward. Small steamboats have ascended the river as far as Shubuta, but the principal commercial value of these rivers is their extensive use for rafting logs. The general course of the Leaf River is southeastward. Its basin covers a pear-shaped area of 3,369 square miles, lying between the Pearl and Chickasawhay rivers.

An interesting feature of this discussion is a comparison of the stream flow of these two systems to demonstrate the extent to which topography controls the run-off of rivers. The divide separating the Pearl River watershed from that of the Mississippi River on the west ranges from 400 feet to nearly 600 feet in elevation, and that between the Chickasawhay and Tombigbee on the east is about the same height, while nearly as great elevations separate the two systems under discussion.

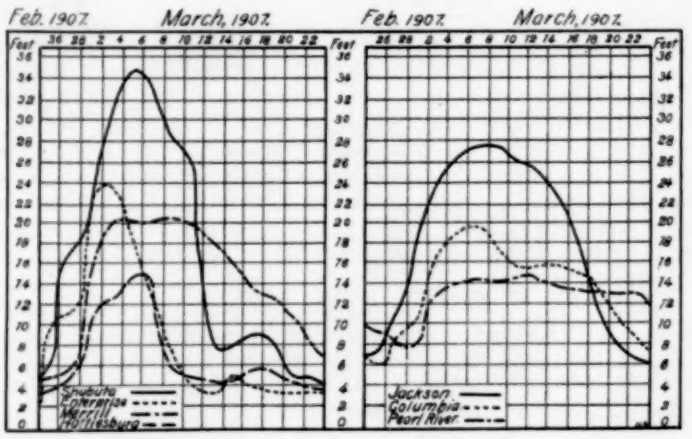


FIG. 1.—Hydrograph of floods during period from February 24 to March 24, 1907; the section to the left being for Shubuta, Enterprise, Merrill, and Hattiesburg on the Pascagoula River system; and the one to the right being for Jackson, Columbia, and Pearl River, La., on the Pearl River.

Yet fig. 1 reveals a very marked difference in the rapidity of run-off of these two river systems. This is accounted for by the

[1] Tables furnished by Mr. J. H. Scott, Section Director, Vicksburg, Miss.

fact that over most of the Pearl River Basin there is a gradual rise from the main streams up toward the headwaters of their tributaries, where the country stretches off in flat table-lands, while the Chickasawhay and to some extent the Leaf and their main tributaries flow through comparatively narrow valleys, and the courses of the smaller branches soon lead into the hills, which are generally steep with their tops towering from 100 to 200 feet above the main valleys. In fact the Alabama and Vicksburg Railroad tunnels through one of these ridges 6 miles west of Meridian. The rainfall during the period covered by fig. 1 was as follows at the various river stations: Jackson, 4.49 inches; Columbia, 4.60 inches; Pearl River, La., 4.85 inches; Enterprise, 9.78 inches; Shubuta, 4.18 inches; Hattiesburg, 6.18 inches, and Merrill, 10.20 inches. The unusually sudden rise at Merrill during this flood was due to a 24-hour rainfall of 7.08 inches in that vicinity on February 28, while the greatest rainfall in 24 hours at the other stations ranged from 1.50 inch to 3.00 inches.

The average rainfall is practically the same in the basins of both rivers. It contains two periods of maximum, one in February and March, and the second in June and July in the Pascagoula and in July and August in the Pearl Basin. A period of minimum rainfall occurs in October, and there is a secondary minimum in May. The highest average stage of water in the Chickasawhay and Leaf rivers occurs in February, but the more sluggish current of the Pearl causes its highest waters to lag behind the maximum rainfall and occur in March. The average stage during May is nearly as high as in February or March. This is due to the heavy rains accompanying spring thunderstorms. The maximum rainfall period of summer causes only a slight rise in the rivers, because of the increased evaporation due to high temperature, the greater absorption of moisture by vegetation, and the greater capacity of cultivated soil for retaining moisture.

There were from 1 to 4 floods each year from 1905 to 1909, inclusive, in all of these rivers, being of about the same frequency in both the upper and lower portions of the Pearl and Chickasawhay rivers, but less frequent in the Leaf River. But the average number of days annually that flood conditions continued is much the greatest in the upper and extreme lower portions of the Pearl, being 69 days at Pearl River, La., 43 at Jackson, 24 at Columbia, 20 at Shubuta, 14 at Merrill, and only 4 at Hattiesburg. The greatest number of days in any one year with flood stages at Hattiesburg was 5, in 1905 and in 1906; while at Jackson the river was in flood 70 days in 1909, and 100 days at Pearl River, La., which is 22 miles from the mouth of the river. There have been no floods in any of these rivers during 1910.

The following are the highest and lowest stages recorded on all these streams:

Stations.	Maximum stage.		Minimum stage.	
	Height.	Date.	Height.	Date.
Pearl River.	*Feet.*		*Feet.*	
Jackson	36.0	Mar. 31, 1902	0.3	Oct. 26, 1904; Nov. 1–2, 1908.
Columbia	27.6	June 5, 1909	2.8	Oct. 25–Nov. 7; Nov. 16–26, 1908.
Pearl River	16.7	June 8, 9, 1909	2.9	Nov. 14–21, 1908.
Pascagoula River.				
Merrill	25.1	June 4, 1909	0.4	May 18, 1910.
Chickasawhay River.				
Enterprise	35.0	April, 1902	−0.4	Nov. 1–4, 1909.
Shubuta	45.0	April, 1900	0.0	Nov. 26–Dec. 2, 1908.
Leaf River.				
Hattiesburg	20.5	Feb. 12, 1905	2.2	Nov. 27–Dec. 1, 1908.

Mean stages of the Pearl River.

JACKSON, MISS.

This station is 242 miles from the mouth of the river, and 132 miles above Columbia, Miss. Length of record, 6 years. Flood stage, 20 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
6.4	13.5	14.6	11.5	14.1	7.6	3.5	5.2	1.7	1.4	2.3	3.4

COLUMBIA, MISS.

This station is 132 miles below Jackson, Miss., and 110 miles above the mouth of the river Length of record, 6 years. Flood stage, 18 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7.2	11.2	11.7	10.7	12.0	8.6	5.6	5.7	4.6	6.4	4.1	5.4

PEARL RIVER, LA.

This station is 22 miles above the mouth of the river, and 88 miles below Columbia, Miss. Length of record, 4 years. Flood stage, 12 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7.4	9.6	11.4	9.4	11.8	9.4	7.4	7.3	5.5	6.8	4.3	6.3

Mean stages of the Chickasawhay River.

ENTERPRISE, MISS.

This station is 144 miles from the mouth of the river, and 38 miles above Shubuta, Miss. Length of record, 6 years. Flood stage, 18 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3.8	7.5	6.4	5.0	7.2	4.6	.....	.....	.....	.....	1.2	2.6

SHUBUTA, MISS.

This station is 38 miles below Enterprise, Miss., and 106 miles from the mouth of the river. Length of record, 6 years. Flood stage, 25 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7.5	12.7	11.3	8.4	12.9	8.2	.....	.....	.....	.....	2.2	4.7

Mean stages of the Leaf River.

HATTIESBURG, MISS.

This station is 60 miles from the mouth of the river. Length of record, 6 years. Flood stage, 17 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
5.2	7.1	6.4	6.1	6.8	5.0	.....	.....	.....	.....	3.0	4.0

Mean stages of the Pascagoula River.

MERRILL, MISS.

This station is 78 miles from the mouth of the river, near the junction of the Chickasawhay and Leaf rivers. Length of record, 6 years. Flood stage, 20 feet.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
8.4	11.1	11.8	9.8	11.6	8.5	5.2	5.5	3.5	4.2	2.6	5.3

Normal precipitation over the Pearl River Basin.[1]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
4.77	5.81	5.83	4.80	4.18	4.65	5.64	5.16	3.41	2.39	3.16	4.89	54.69

[1] Computed for the Pearl Basin from the normal rainfall at Brookhaven, Crystal Springs, Hazelhurst, Jackson, Lake, Louisville, Magnolia, and Pearlington.

Normal precipitation over the Chickasawhay River Basin.[2]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
4.85	5.55	5.31	4.62	4.04	5.20	5.65	4.83	3.75	2.38	3.34	5.05	54.57

[2] Computed for the Chickasawhay Basin from the normal rainfall at Leakesville Meridian, and Waynesboro.

Normal precipitation over the Leaf River Basin.[3]

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
4.99	5.88	4.92	4.44	4.63	5.36	6.68	5.21	4.29	1.84	3.11	4.52	55.87

[3] Hattiesburg being the only station in the basin with a record of sufficient length to establish a satisfactory normal, the normal for this station is used. There are no stations along the Pascagoula River with sufficient length of record to establish rainfall normals, so the normal precipitation for the Pascogoula system may be obtained by combining those for the Chickasawhay and Leaf rivers.

TABLE 1—*Climatological data for August, 1910. District No. 2, South Atlantic and east Gulf States.*

Stations.	Counties.	Elevation feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																			
Arvonia	Buckingham	350	6	73.2	− 2.3	92	3	56	7	33	2.87	− 2.53	0.59	0.0	16	7	20	4	ne.	Rev. P. F. Jones.
Ashland‖	Hanover	221	19	73.2	− 2.5	92	3	58	7†	31	1.90	− 2.66	0.33	0.0	13	3	17	11	ne.	E. L. C. Scott.
Buchanan‖‖	Botetourt	820	6								1.06		0.52	0.0	5					D. D. Booze.
Callaville	Brunswick	250	16	74.0	− 2.2	91	4	58	23†	25	6.12	+ 0.93	2.10	0.0	11	12	17	2	n.	F. M. Gage.
Cape Henry	Princess Anne	20	36	76.2	− 0.7	91	4	65	1†	21	3.87	− 2.23	1.06	0.0	15	10	9	12	se.	U. S. Weather Bureau.
Charlottsville	Albemarle	800	21	72.8	− 1.7	90	3†	57	28	26	3.00	− 2.51	1.10	0.0	11	9	10	12	ne.	Leander McCormick.
Clarksville‖‖	Mecklenburg		16								4.90	− 0.62	1.02	0.0	14					J. Henry Ligon.
Columbia	Fluvanna	246	12	73.5		90	3	59	6†	27	1.61	− 3.49	0.52	0.0	8	12	5	14	ne.	Chesapeake & Ohio R. R.
Danville‖‖	Pittsylvania	413	10								4.17		1.14	0.0	11					C. G. Watkins.
Diamond Springs	Princess Anne	20		75.5		91	4	59	1	24	3.77		0.81	0.0	15	9	10	12		Virginia Experiment Sta.
Hampton	Elizabeth City	5	27	76.6	− 1.1	88	4†	63	13	18	6.33	+ 1.41	2.20	0.0	13	8	6	17		Hampton Institute.
Hot Springs	Bath	2,195	18	66.1	− 2.9	83	3	48	7	30	0.86	− 2.73	0.22	0.0	10	15	14	2		James P. Scott.
Ivor	Southampton	87	1	75.0		93	3	58	1	29	4.76		1.81	0.0	12					N. & W. Ry., Exp. Farm.
Lassiter	Goochland	100									1.88		0.70	0.0	12	12	17	2		T. J. Davis.
Lexington	Rockbridge	1,060	33	70.4	− 2.9	96	10	48	26†	35	1.35	− 2.61	0.35	0.0	11	17	6	8		Virginia Military Institute.
Lynchburg	Campbell	685	39	73.3	− 2.1	91	3	59	28	27	2.32	− 1.86	0.75	0.0	16	2	23	6	ne.	U. S. Weather Bureau.
New Castle‖‖	Craig	1,300	1								2.73		1.08	0.0	8					Miss J. L. Martin.
Newport News	Warwick	55	7	77.4		91	2†	65	20†	21	7.32		1.68	0.0	17	5	14	12	se.	Ernest W. Sniffen.
Norfolk	Norfolk	91	40	76.4	− 0.6	90	26	65	13	19	4.05	− 1.95	1.32	0.0	12	7	11	13	se.	U. S. Weather Bureau.
Petersburg	Dinwiddie	60	23	75.2	− 1.7	94	1	58	1	36	9.65	+ 5.07	3.30	0.0	14				n.	Central State Hospital.
Randolph‖‖	Charlotte	334	6								2.98		1.46	0.0	8					W. B. Spencer.
Richmond	Henrico	144	31	74.6	− 2.9	92	3	61	6	27	2.90	− 1.51	0.63	0.0	14	1	15	15	ne.	U. S. Weather Bureau.
Rocky Mount	Franklin	1,150	16	71.5	− 4.0	92	3	53	24	31	5.03	+ 1.28	1.08	0.0	12				sw.	G. W. B. Hale.
Saxe	Charlotte	350	7	75.2		97	3	57	14	34	2.83		0.91	0.0	9	15	3	12	s.	State Experiment Farm.
Spottsville (near)	Surrey	15	22	75.2	− 0.9	94	3	58	1	30	4.30	− 1.50	1.15	0.0	14	9	7	15	sw.	B. W. Jones.
Williamsburg	James City	70	19	73.2	0.0	93	4	60	7	28	6.10	− 2.12	1.10	0.0	13	15	6	10	ne.	Eastern State Hospital.
North Carolina.																				
Beaufort	Carteret	10	8	79.0		89	3	70	13†	15	7.83		2.06	0.0	20	15	6	10	s.	H. D. Aller.
Belhaven	Beaufort	4	1	78.0		93	3†	61	1	25	17.67		5.84	0.0	15	9	9	13	s.	W. S. Hopkins.
Brewers	Wilkes	1,950	13	73.2	− 1.6	92	18	55	9†	32	3.37	− 3.21	1.28	0.0	18	4	18	9	w.	W. L. Brewer.
Caroleen	Rutherford	806	10																	S. B. Tanner.
Chalybeate Springs	Harnett	500	4	75.6		95	3	59	22	27	7.64		1.50	0.0	15	13	11	7	sw.	J. A. Smith.
Chapel Hill	Orange	500	52																	Prof. A. H. Patterson.
Charlotte	Mecklenburg	773	34	70.7	+ 0.1	92	26	63	22	23	4.82	− 0.73	1.76	0.0	12	4	14	13	ne.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150				89	31				10.11		7.03	0.0	16	15	10	6	sw.	J. M. Flack.
Clinton	Sampson	156	3																	W. T. Boyette.
Durham (near)	Durham	406	1								7.51		2.10	0.0	15					Supt. Durham Water Co.
Eagletown	Northampton	66	5	76.5		93	3	60	22	27	9.40		3.31	0.0	14	14	13	4	sw.	J. T. Elliott.
Edenton	Chowan	30	16	74.9	− 3.3	89	26	54	9	31	8.75	+ 2.77	2.10	0.0	13	7	11	13	ne.	E. R. Conger.
Enfield (near)	Halifax	99									6.71		1.13	0.0	13					T. S. Inborden.
Fayetteville	Cumberland	170	23	77.8	+ 0.1	95	3	60	22	26	5.55	− 1.22	1.50	0.0	13					Frank Glover.
Goldsboro	Wayne	102	40	78.2	− 0.1	96	4	60	23	28	8.20	+ 1.23	1.70	0.0	16				w.	Mrs. N. B. Taylor.
Graham	Alamance	656	8								5.39		1.18	0.0	14					Dr. W. R. Goley.
Greensboro	Guilford	843	29	76.6	0.0	96	2	61	27†	30	6.79	+ 1.45	2.00	0.0	15				s.	A. R. Horry.
Greenville	Pitt	75	17								7.70	+ 0.68	1.37	0.0	16					R. M. Hearne.
Hatteras	Dare	11	36	77.5	− 0.7	88	3	67	13	16	13.14	+ 7.30	5.21	0.0	24	10	11	10	sw.	U. S. Weather Bureau.
Henderson	Vance	508	17	74.9	− 2.3	91	3	62	27	21	6.22	− 0.03	1.24	0.0	14	9	16	6	ne.	Enoch Powell.
Kinston	Lenoir	46	12	78.2	− 1.3	92	3†	60	22	24	7.22	+ 0.98	2.00	0.0	16	3	13	15	s.	H. C. V. Peebles.
Lenoir	Caldwell	1,186	37	74.5	+ 0.8	92	3†	56	9	33	6.73	+ 0.76	1.48	0.0	15	25	3	3	s.	G. M. Goforth.
Lexington	Davidson	810	9																	H. R. Berrier.
Lincolnton	Lincoln	994	5	75.0		92	3	59*	22	27*	4.87		1.75	0.0	10	14	15	2	w.	S. P. Houser.
Louisburg	Franklin	375	19	76.0	− 1.1	92	3	62	22	23	5.76	+ 0.06	0.80	0.0	11	11	13	7	sw.	T. B. Wilder.
Lumberton	Robeson	102	27	79.0	− 0.1	98	3	59	22	30	6.05	− 0.20	1.21	0.0	14				ne.	B. M. Davis.
Manteo	Dare	12	5	77.0		90	5	60	1	22	13.94		5.56	0.0	11	9	14	8	ne.	U. S. Weather Bureau.
Marion	McDowell	1,425	18	74.4	− 0.6	93	17	55	23	33	9.61	+ 3.40	2.84	0.0	16	9	20	2	w.	Sgt. Thomas McGuire.
Moncure	Chatham	145	16	76.4	− 1.2	94	3†	60	22	27	4.10	− 2.03	1.35	0.0	10	5	7	19	se.	B. J. Utley.
Monroe	Union	586	16	77.2	+ 0.5	93	3†	60	23	27	5.42	− 1.61	1.73	0.0	9	15	10	6	ne.	T. A. Ashcraft.
Morganton	Burke	1,135	23	74.2	− 0.6	89	3†	58	9	29	6.19	+ 0.99	1.45	0.0	14	19	9	3	ne.	H. D. Judd.
Mt. Airy	Surry	1,048	22	72.4	− 1.4	90	3†	55	9†	32	3.63	− 2.47	0.79	0.0	13	16	10	5	ne.	Prof. A. H. Merritt.
Mt. Holly	Gaston	616	13								4.84	− 1.14	1.60	0.0	10					J. W. Holland.
Nashville	Nash	190	6	76.6		94	3	60	22	29	8.54		1.64	0.0	16	2	12	17	e.	J. B. Boddie.
Newbern	Craven	12	28	76.5	− 1.7	90	3†	62	21†	24	11.25	+ 3.34	3.70	0.0	18				ne.	J. B. Hill.
Pinehurst‖	Moore	650	6	77.2		94	3	62	22	23	4.71		0.95	0.0	13	14	12	5	w.	General Office.
Pittsboro	Chatham	480	19	77.0	+ 1.1	96	3	62	23	27	3.06	− 2.15	1.10	0.0	10	16	2	13		B. M. Poe.
Raleigh	Wake	390	39	76.2	− 0.6	92	3	63	22	23	7.75	+ 1.85	2.22	0.0	16	6	14	11	ne.	U. S. Weather Bureau.
Ramseur	Randolph	442	3	77.2		96	21†	60	9†	34	6.01		2.20	0.0	17				w.	A. H. York.
Randleman	....do	810	5								2.81		1.09	0.0	14					J. R. Walton.
Reidsville	Rockingham	828	11	75.8	+ 0.1	94	8†	61	27	31	2.39	− 3.11	0.58	0.0	14	4	2	25	sw.	E. M. Redd.
Rock House	Macon	3,100	18	68.8	− 2.3	81	4	54	14	19	9.20	− 0.26	3.63	0.0	17	7	17	7	se.	B. C. Hawkins.
Rockingham	Richmond	210	15	78.0	− 1.5	95	3	62	21	24	6.80	+ 0.13	1.85	0.0	11					H. S. Ledbetter.
Rocky Mount	Nash	105									9.17		1.94	0.0	12					W. H. Calcutt.
Roxboro	Person	600	12	76.6	+ 0.3	95	3	61	27	27	4.93	+ 0.88	1.70	0.0	14				s.	N. Lunsford.
Salem	Forsythe	1,000	15	73.9	− 2.8	90	3	60	9†	26	6.75	+ 1.24	2.21	0.0	15					Rev. H. E. Rondthaler.
Salisbury	Rowan	760	26	77.2	− 0.3	95	2†	60	13	30	3.29	− 2.03	1.10	0.0	8	12	6	13	w.	Miss Thelma Wilkinson.
Saxon	Stokes	900	18	73.0	− 2.5	90	2†	58	9	31	5.84	+ 0.67	2.60	0.0	13	4	13	14	ne.	R. P. McAnnaly.
Scotland Neck	Halifax	80	6	74.4		90	2†	59	22	26	5.04		0.90	0.0	16	4	11	16	s.	J. Y. Savage.
Selma	Johnston	225	20																	Dr. R. J. Noble.
Settle	Iredell	700	14	74.0	− 2.4	92	3†	54	27	29	6.30	+ 0.92	2.90	0.0	9	8	11	12	sw.	C. H. Smith.
Sloan	Duplin	50	17	77.4	− 0.6	93	3	61	22	25	9.39	+ 2.19	1.78	0.0	15	11	4	16	s.	D. M. Sholar.
Snow Hill	Greene	80	5	77.6		94	3	58	22	29	11.48		2.19	0.0	15	5	19	7	s.	L. J. H. Mewborn.
Southern Pines	Moore	519	20																	Mrs. P. H. Beck.
Southport	Brunswick	18	55	78.2	− 1.5	89	2	65	23	20	5.24	− 0.39	0.90	0.0	14	13	8	10	sw.	Mrs. C. E. Taylor.
Statesville	Iredell	950	22	75.3	− 0.2	92	2†	59	12†	31	6.49	+ 0.93	1.84	0.0	11	11	12	8	sw.	D. M. Thompson.
Tarboro	Edgecombe	50	25	78.6	0.0	96	3	60	22	29	9.07	+ 2.34	1.80	0.0	15	12	10	9	se.	E. V. Zoeller.
Troy	Montgomery	800	1																	Mrs. O. B. Deaton.
Weldon	Halifax	81	38	78.0	+ 0.8	97	3	63	22	29	5.09	− 0.36	1.15	0.0	14				n.	H. S. S. Cooper.
Whiteville	Columbus	59	5	78.1		94	3†	61	22	27	9.24		2.60	0.0	12	12	18	1	se.	Rev. C. C. Smith.
Willard	Pender	51	2	77.0		92	3	59	22	25	12.29		1.96	0.0	15	11	10	10	s.	J. H. Jefferies.
Wilmington	New Hanover	52	39	77.0	− 0.6	90	11	65	23	20	8.47	+ 1.96	2.94	0.0	18	4	11	16	sw.	U. S. Weather Bureau.
Yanceyville	Caswell	600																		A. Y. Kerr.
South Carolina.																				
Aiken	Aiken	565	26	79.6	0.0	94	8†	63	13	24	4.43	− 1.80	3.05	0.0	2	26	0	5	w.	Dr. Huger T. Hall.
Allendale	Barnwell	186	22	81.6	+ 1.2	100	9†	64	22	31	4.95	− 1.11	2.50	0.0	6	10	11	10		A. R. Hiers.
Anderson	Anderson	764	9	77.8	+ 0.1	94	16	61	13†	28	3.46	− 2.62	1.31	0.0	10	18	2	11	e.	H. H. Russell.
Batesburg	Lexington	656	22	78.6	− 0.2	93	9	62	22	24	6.26	+ 0.64	2.14	0.0	9	11	6	14	s.	E. J. Hite.
Blackville	Barnwell	296	22	80.0	− 0.5	97	18	61	19	32	2.87	− 3.01	0.97	0.0	7	8	12	11	ne.	Miss M. E. Lange.
Blairs	Fairfield	293	6								4.80		1.20	0.0	8	6	10	15	s.	John R. Ragsdale.

TABLE 1.—*Climatological data for August, 1910. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Carolina—Cont'd.																				
Bowman	Orangeburg	100	9	78.4	.....	97	11	63	23	25	5.21	.....	1.83	0.0	11	18	8	5	w.	B. O. Evans.
Calhoun Falls	Abbeville	508	17	.....	.....	.....	.....	.....	.....	.....	2.31	− 3.70	1.16	0.0	3	.....	.....	.....	sw.	M. L. Crisp.
Camden	Kershaw	222	44	.....	.....	.....	.....	.....	.....	.....	4.48	− 0.99	1.68	0.0	9	14	9	8	ne.	W. C. Brown.
Catawba	York	562	5	.....	.....	.....	.....	.....	.....	.....	4.34	.....	1.25	0.0	10	13	6	12	.....	Jas. C. Faris.
Chappells	Newberry	402	5	.....	.....	.....	.....	.....	.....	.....	5.22	.....	4.04	0.0	4	18	6	7	w.	W. R. Zimmerman.
Charleston	Charleston	48	40	79.7	− 0.6	95	8	70	12	18	10.00	+ 3.03	5.73	0.0	14	6	18	7	s.	U. S. Weather Bureau.
Cheraw	Chesterfield	144	22	78.6	− 0.1	96	3	61	22	25	7.73	+ 1.14	2.93	0.0	12	7	12	12	.....	J. H. Powe.
Clemson College	Oconee	850	19	76.2	− 1.9	89	19	63	14†	22	3.98	− 1.73	2.80	0.0	5	21	6	4	s.	Prof. John N. Hook.
Columbia	Richland	351	23	78.5	− 1.0	93	8	62	22	23	8.20	+ 1.42	2.12	0.0	14	5	19	7	ne.	U. S. Weather Bureau.
Conway	Horry	25	18	78.8	− 0.3	94	19	62	19	32	8.61	+ 1.67	2.06	0.0	16	3	4	24	s.	P. C. Quattlebaum.
Darlington	Darlington	175	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. C. McCall.
Dillon	Dillon	100	6	79.3	− 0.3	96	1†	60	21	27	4.69	− 0.98	0.92	0.0	17	.....	.....	.....	.....	A. E. Rowell.
Effingham	Florence	106	18	.....	.....	.....	.....	.....	.....	.....	5.44	− 1.44	1.20	0.0	10	18	1	12	e.	H. B. McCall.
Ferguson	Berkeley	51	2	.....	.....	.....	.....	.....	.....	.....	4.99	.....	1.59	0.0	8	18	0	13	e.	Pierre Gaillard.
Florence	Florence	136	22	80.6	+ 0.2	98	26	61	21	30	4.35	− 2.33	0.91	0.0	12	8	2	21	ne.	H. K. Gilbert.
Georgetown	Georgetown	12	17	78.2	− 2.0	92	6†	65	27†	19	11.85	+ 4.82	2.50	0.0	12	1	21	9	ne.	A. P. Hazard.
Greenville	Greenville	989	18	76.4	+ 0.7	92	19	62	22†	26	3.76	− 2.71	1.65	0.0	6	20	2	9	sw.	Mrs. S. A. Crittenden.
Greenwood	Greenwood	671	22	80.2	+ 1.3	93	3†	62	22	31	3.87	− 1.78	1.55	0.0	9	11	0	20	w.	M. M. Calhoun.
Heath Springs	Lancaster	568	9	80.4	.....	97	14	60	28	28	3.60	.....	1.40	0.0	7	16	12	3	w.	J. A. Weaner.
Jacksonboro	Colleton	13	2	78.3[e]	.....	93	7†	66	12†	19	8.24	.....	1.36	0.0	14	5[a]	14[a]	11[a]	se.	W. E. Haskell, jr.
Kingstree	Williamsburg	54	22	79.8	+ 1.1	95	8†	65	13†	25	7.94	+ 1.58	2.15	0.0	11	8	9	14	sw.	A. O. Matthews.
Liberty	Pickens	900	16	78.0	+ 0.4	94	2†	61	14†	32	7.23	+ 0.15	5.05	0.0	10	17	11	3	ne.	Jno. T. Boggs.
Little Mountain	Newberry	711	17	77.6	− 2.0	92	9	63	20†	22	4.78	− 0.82	1.60	0.0	11	20	3	8	n.	Dr. J. M. Sease.
Meriwether	Edgefield	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Middleton.
Newberry	Newberry	502	6	79.1	0.0	96	19	63	22	26	7.07	+ 1.38	2.87	0.0	10	3	20	8	e.	W. G. Peterson.
Pelzer	Anderson	873	5	.....	.....	.....	.....	.....	.....	.....	4.70	.....	1.52	0.0	7	15	1	15	w.	John M. Ward.
Pinopolis	Berkeley	55	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss E. P. Ravenel.
St. George	Dorchester	109	22	81.0	+ 1.2	96	10	67	13	22	9.49	+ 2.89	2.10	0.0	12	29	0	2	.....	G. F. Lewis.
St. Matthews	Calhoun	209	22	78.2	− 1.3	96	8	66	22†	20	3.57	− 2.36	1.50	0.0	7	11	0	20	.....	J. S. Wannamaker.
Saluda	Saluda	530	8	79.0	.....	96	1†	62	13†	27	7.98	.....	3.35	0.0	10	19[b]	6[b]	4[b]	e.	Alvin Etheridge.
Santuc	Union	512	15	79.2	+ 1.1	101	3†	62	14†	35	7.67	+ 1.94	2.37	0.0	13	3	19	9	ne.	E. W. Jeter.
Smith Mills	Williamsburg	62	15	.....	.....	.....	.....	.....	.....	.....	4.40	− 2.92	1.88	0.0	10	11	3	18	e.	W. G. Walker.
Society Hill	Darlington	192	19	77.5	− 0.9	91	3†	62	21	23	3.79	− 2.38	1.11	0.0	12	8	14	9	ne.	Major J. J. Lucas.
Spartanburg	Spartanburg	875	19	79.2	+ 0.8	99	3	62	22	30	6.46	+ 0.13	3.40	0.0	9	10	1	20	.....	F. P. Robinson.
Summerville	Dorchester	75	13	78.6	− 0.5	94	10	66	13	21	10.16	+ 1.78	2.47	0.0	22	1	26	4	e.	Miss E. H. Gadsen.
Trenton	Edgefield	620	17	80.0	+ 0.2	97	4†	60	24†	27	4.59	− 2.22	2.94	0.0	6	5	25	1	s.	C. A. Long.
Trial	Berkeley	85	23	77.3	.....	92	8†	60	30	23	6.94	− 0.63	2.62	0.0	15	1	5	25	ne.	Etsell Gaillard.
Walterboro	Colleton	69	6	81.0	.....	101	9	66	3	30	7.35	.....	1.45	0.0	19	7[a]	14[a]	9[a]	.....	J. A. Westerberg.
Winnsboro	Fairfield	545	21	78.5	+ 0.3	98	1	64	23	28	9.51	+ 3.47	4.77	0.0	10	11	19	1	sw.	John W. Seigler.
Winthrop College	York	690	11	78.2	− 0.3	96	19	62	22	30	4.88	− 2.17	1.67	0.0	9	13[a]	11[a]	6[a]	.....	E. R. Rivers.
Yemassee	Hampton	23	15	79.2	− 1.3	96	7†	66	13	23	8.00	+ 1.22	2.07	0.0	18	14	1	16	.....	J. G. Hutson.
Georgia.																				
Abbeville	Wilcox	.....	7	.....	.....	.....	.....	.....	.....	.....	1.24	.....	0.39	0.0	9	5	10	16	s.	W. H. Calhoun.
Adairsville	Bartow	772	18	77.1	− 0.8	93	3	62	9†	26	4.89	+ 0.72	2.70	0.0	8	18	11	2	.....	Dr. J. P. Bowdoin.
Albany	Dougherty	230	25	81.4	− 0.5	97	10	63	24	27	2.44	− 3.83	0.62	0.0	10	20	7	4	sw.	Geo. C. Brosnan.
Allapaha	Berrien	293	21	81.8	+ 1.4	97	10	69	29	20	2.56	− 3.42	0.59	0.0	11	3	18	10	nw.	James T. Austin.
Americus	Sumter	362	27	79.6	− 1.5	93	7†	66	22	25	1.61	− 3.72	0.55	0.0	6	18	5	8	ne.	F. P. Harrold.
Athens	Clarke	694	33	78.6	+ 1.4	96	25	64	13†	27	2.41	− 2.99	0.92	0.0	10	15	6	10	e.	C. D. Cox.
Atlanta	Fulton	1,218	45	77.0	− 0.2	91	1	64	13	25	2.49	− 1.98	1.12	0.0	8	13	10	8	ne.	U. S. Weather Bureau.
Augusta	Richmond	180	44	79.8	− 0.2	93	19	65	12	22	6.04	+ 0.70	2.46	0.0	8	10	14	7	ne.	U. S. Weather Bureau.
Bainbridge	Decatur	119	18	82.1	+ 1.0	100	16	67	29	30	5.08	− 0.76	2.02	0.0	12	14	2	15	nw.	Mrs. C. O. Wimberley.
Barnesville	Pike	875	2	78.0	.....	93	19	64	14†	25	4.27	.....	1.74	0.0	9	.....	.....	.....	.....	Prof. T. O. Galloway.
Blakely	Early	300	19	81.8	+ 0.9	102	8†	65	12†	37	1.05	− 5.92	0.43	0.0	4	5	21	5	e.	Ralph M. Hobbs.
Butler	Taylor	650	8	.....	.....	.....	.....	.....	.....	.....	2.96	.....	2.16	0.0	4	17	7	7	se.	Mrs. Mamie F. Wallace.
Camak	Warren	613	17	78.6[e]	− 0.9	97	9	60	13†	33[e]	1.05	− 3.32	0.75	0.0	2	6[e]	8[e]	14[e]	.....	J. A. Chapman.
Canton	Cherokee	894	17	.....	.....	.....	.....	.....	.....	.....	2.27	− 2.10	1.22	0.0	3	20	6	5	e.	G. W. Evans.
Carlton	Madison	557	11	.....	.....	.....	.....	.....	.....	.....	2.33	− 4.39	0.97	0.0	5	18	0	13	e.	M. C. Power.
Clayton	Rabun	2,100	17	73.4	− 0.7	89	1†	55	14	30	3.81	− 3.85	1.93	0.0	5	17	8	6	e.	A. J. Duncan.
Columbus	Muscogee	262	23	80.2	0.0	94	1	68	9†	25[a]	3.35	− 1.87	1.76	0.0	8	18	4	9	nw.	A. J. Land.
Covington	Newton	800	17	.....	.....	.....	.....	.....	.....	.....	3.62	− 1.81	0.80	0.0	8	11	13	7	e.	Mrs. Sarah E. Cruse.
Cuthbert	Randolph	446	11	80.3	+ 0.3	98	16	61	13	30	0.94	.....	0.49	0.0	4	8	20	3	.....	Prof. W. McMichael.
Dahlonega	Lumpkin	1,519	18	75.2	+ 0.6	93	1	60	11†	29	7.57	+ 1.28	4.87	0.0	17	3	24	4	se.	Prof. B. P. Gaillard.
Diamond	Gilmer	2,020	20	72.6	− 0.6	87	1†	57	10†	27[b]	3.98	− 3.12	1.24	0.0	11	14[a]	10[a]	6[a]	.....	R. A. Kimzey.
Dublin	Laurens	452	16	.....	.....	.....	.....	.....	.....	.....	2.58	− 1.87	0.70	0.0	10	13	5	13	.....	Mrs. M. E. Martin.
Dudley	...do	.....	8	80.0	.....	96	19	65	13	26	1.20	.....	0.63	0.0	4	10	20	1	se.	J. H. M. O'Sullivan.
Eastman	Dodge	361	19	82.2	+ 0.8	100	10	66	22	28	0.77	− 4.17	0.25	0.0	7	10	4	17	w.	Miss A. M. Bohannon.
Eatonton	Putnam	.....	7	77.8[e]	.....	94	16	60	23	29[e]	2.99	.....	0.58	0.0	8	.....	.....	.....	.....	Prof. W. C. Wright.
Elberton	Elbert	710	19	79.0	+ 1.3	96	19	63	12†	28	3.48	− 2.38	1.50	0.0	7	19	12	0	e.	H. A. Roebuck.
Experiment	Spalding	946	10	78.0	− 0.5	92	19	65	22	22	2.36	− 2.76	0.65	0.0	7	6	24	1	.....	Martin V. Calvin.
Fort Gaines	Clay	166	23	81.1	+ 0.5	98	16	66	29	30	3.94	− 1.83	1.70	0.0	8	18	3	10	ne.	Mrs. Eva T. Graham.
Gainesville	Hall	1,254	34	75.1	.....	93	19	58	11	31	2.27	− 3.66	1.13	0.0	7	19	0	12	e.	W. C. Walker.
Gillsville	...do	1,052	20	77.0	− 0.6	94	1	61	13	26	4.92	− 0.47	1.24	0.0	11	4	24	3	e.	J. W. Casey.
Glennville	Tatnall	.....	5	80.6	.....	97	10	68	17†	25	3.54	.....	1.27	0.0	12	19	7	5	e.	Wm. C. Barnard.
Gore	Chattooga	.....	12	77.1	+ 0.1	93	17†	60	1†	30	5.82	+ 0.70	2.10	0.0	9	21	4	6	n.	H. M. Ponder.
Greensboro	Greene	598	8	79.2	.....	97	19	61	23	30	1.35	.....	0.56	0.0	7	12	9	10	e.	R. L. Caldwell.
Griffin	Spalding	973	21	77.0	− 1.3	95	1	60	26	33	3.77	− 1.91	0.95	0.0	10	12	1	18	ne.	V. P. Enloe.
Harrison	Washington	245	12	78.9	− 1.5	96	18	60	23	31	2.22	− 4.39	0.62	0.0	7	26	3	2	e.	A. W. J. Wood.
Hartwell	Hart	838	2	.....	.....	.....	.....	.....	.....	.....	5.65	.....	1.90	0.0	10	21	0	10	se.	Dr. W. I. Hailey.
Hawkinsville	Pulaski	235	15	81.6[e]	.....	94	7†	69	12†	23[e]	.....	.....	.....	0.0	.....	.....	.....	.....	sw.	R. H. Wood.
Helena	Telfair	260	3	81.5	.....	97	10	66	14	27	1.37	.....	0.47	0.0	11	0	11	20	e.	James D. Smith.
Lafayette	Walker	871	4	76.3	.....	94	2	59	1	31	3.86	.....	1.44	0.0	9	12	8	11	w.	Ralph A. Snow.
Lisbon	Lincoln	.....	4	79.6	.....	97	16	62	23	31	3.13	.....	1.72	0.0	10	20	0	11	ne.	B. J. DuBose.
Lost Mountain	Cobb	.....	10	.....	.....	94	2	.....	.....	.....	2.76	− 2.35	1.38	0.0	6	0	29	2	w.	A. N. Mayes.
Louisville	Jefferson	259	18	78.7	.....	91	19	65	23	20	2.90	− 2.48	1.11	0.0	8	14	16	1	.....	J. C. Little.
Lumber City	Telfair	.....	2	.....	.....	.....	.....	.....	.....	.....	1.32	.....	0.42	0.0	6	8	10	13	s.	Walter A. Hilton.
Lumpkin	Stewart	650	17	80.9	+ 0.7	95	5†	66	13†	28	1.96	− 3.99	1.25	0.0	2	6	24	1	ne.	A. W. Latimer.
Macon	Bibb	370	33	79.1	− 1.2	92	19	65	13	23	2.61	− 2.07	0.56	0.0	11	8	13	10	ne.	U. S. Weather Bureau.
Marshallville	Macon	500	18	79.7	− 0.6	97	10†	62	15	32	3.70	− 1.40	2.15	0.0	8	3	14	14	w.	E. C. Bryan.
Mauzy	Colquitt	.....	12	81.0	− 0.2	98	10	68	14†	29[b]	3.02	− 3.50	2.40	0.0	10	13[b]	14[b]	2[b]	sw.	T. J. Hudson.
Milledgeville	Baldwin	276	22	80.2	+ 0.9	96	19	64	22	25	2.06	− 3.21	0.97	0.0	7	15	3	13	nw.	Prof. O. M. Cone.
Millen	Jenkins	158	23	81.6[e]	+ 0.6	99	7†	65	23	34	3.25	− 1.88	0.96	0.0	8	17[a]	0[a]	13[a]	se.	M. G. McComb.
Montezuma	Macon	292	5	.....	.....	.....	.....	.....	.....	.....	3.14	.....	1.12	0.0	7	13	6	12	w.	R. E. Fokes.
Monticello	Jasper	800	14	79.0	0.0	96	19	62	23	31	2.05	− 3.41	0.51	0.0	10	16	0	15	.....	Miss Maude C. Penn.
Morgan	Calhoun	337	18	80.8	+ 0.7	92	16	68	31	20	1.21	− 5.20	1.00	0.0	3	19	11	1	w.	W. J. Ragan.
Newnan	Coweta	959	22	77.1	− 1.2	94	1	60	23	29	3.86	− 1.43	2.10	0.0	8	20	2	9	e.	Mrs. I. J. Milner.
Norcross	Gwinnett	1,078	.....	.....	.....	.....	.....	.....	.....	.....	1.47	.....	0.96	0.0	8	12	11	8	.....	W. O. Medlock.
Point Peter	Oglethorpe	1,000	21	77.4	− 0.7	94	19	62	12†	25	2.32	− 3.75	0.60	0.0	6	13	15	3	e.	C. M. Witcher.

TABLE 1.—*Climatological data for August, 1910. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Georgia—Cont'd.																				
Poulan	Worth	365	19	80.2	+ 0.1	96	16	66	13†	28	1.84	− 5.83	0.87	0.0	12	15	13	3	.....	Dr. J. F. Wilson.
Putnam	Marion	.....	11	80.0	.....	98	3†	63	24	33	3.04	− 1.76	1.26	0.0	6	12[b]	12[b]	5[b]	s.	Mrs. J. M. Collum.
Quitman	Brooks	173	26	80.3	− 0.6	95	11	68	15†	24	3.89	− 2.64	0.98	0.0	9	18	1	12	ne.	A. B. Jones.
Ramsey	Murray	1,363	17	74.4	− 2.7	87	2†	60	1	22	4.26	− 0.49	1.55	0.0	10	20	4	7	sw.	D. E. Humphreys.
Resaca	Gordon	657	17	.....	.....	.....	.....	.....	.....	.....	2.90	− 1.55	1.40	0.0	5	24	0	7	sw.	D. A. Norton.
Rome	Floyd	576	35	78.0	− 0.8	95	2†	60	1	31	2.30	− 1.54	0.80	0.0	6	20	2	9	w.	W. M. Towers.
St. George	Charlton	.....	4	80.0	.....	96	7†	68	25	25	14.17	.....	2.65	0.0	20	10	7	14	sw.	A. N. Lund.
St. Marys	Camden	20	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	David C. Sterling.
Savannah	Chatham	65	60	79.3	− 1.4	94	11	67	13	20	11.75	+ 4.01	8.57	0.0	15	8	13	10	se.	U. S. Weather Bureau.
Statesboro	Bulloch	253	10	81.6	+ 0.3	99	10†	67	13†	28	6.81	+ 0.64	1.93	0.0	13	10	19	2	.....	J. C. Cromley.
Talbotton	Talbot	750	17	79.6	− 0.2	97	18	62	23	31	5.64	− 0.20	2.15	0.0	8	20	4	7	ne.	Dr. E. L. Bardwell.
Tallapoosa	Haralson	1,150	18	78.0	+ 0.2	94	19†	60	9	31	3.19	− 1.36	1.50	0.0	7	17	6	8	nw.	Elmer C. Bishop.
Thomasville	Thomas	273	27	79.8	− 1.0	96	10	67	18	26	4.55	− 1.75	1.42	0.0	14	13	13	5	e.	U. S. Weather Bureau.
Toccoa	Stephens	1,050	25	75.8	− 0.5	90	2†	62	13†	21	6.54	− 0.21	3.20	0.0	10	18	0	13	e.	Mrs. Alice Starke.
Valdosta	Lowndes	219	5	81.2	.....	100	19	68	14†	31	4.60	.....	1.50	0.0	6	16	9	6	w.	Miss Annie Twitty.
Valona	McIntosh	10	10	81.4[f]	.....	96	11†	67	13	29[f]	10.52	+ 5.45	2.65	0.0	8	14	8	9	sw.	J. M. Atwood.
Washington	Wilkes	630	23	79.8	− 0.6	98	19	64	13†	28	4.28	− 1.10	2.02	0.0	7	12	9	10	ne.	Miss Ella B. Smith.
Waycross	Ware	131	21	81.2	− 1.0	97	10†	68	15†	27	7.00	+ 0.81	2.10	0.0	16	20	1	10	ne.	Thomas Sasser.
Waynesboro	Burke	86	19	79.5	− 1.4	98	16	61	23	31	6.58	+ 1.06	3.25	0.0	9	12	5	14	w.	Mrs. H. W. Blount.
West Point	Troup	620	22	79.6	− 1.1	95	1†	66	9†	26	6.21	+ 0.85	2.22	0.0	9	17	2	12	e.	E. N. Dunn.
Woodbury	Meriwether	641	10	76.0	.....	94	1	58	23†	30	1.90	− 3.52	0.76	0.0	6	7	5	19	s.	G. A. Wright.
Florida.																				
Apalachicola	Franklin	24	5	81.4	.....	95	9	70	24	17	2.90	.....	2.00	0.0	4	15	10	6	se.	G. H. Whiteside.
Arcadia	De Soto	61	8	80.7	.....	97	10	66	29	26	7.26	.....	1.43	0.0	21	8	15	8	e.	C. S. Bushnell.
Archer	Alachua	92	24	80.8	− 0.8	96	16	68	1†	27	8.55	+ 1.02	1.50	0.0	16	.....	.....	.....	.....	R. B. Hodgson.
Avon Park	De Soto	150	11	81.4	− 0.5	94	5†	70[i]	19†	.....	8.32	+ 0.83	1.05	0.0	22	3	18	10	se.	O. R. Thacher.
Bartow	Polk	115	13	.....	.....	96	7†	.....	.....	.....	6.66	− 1.27	2.08	0.0	13	.....	.....	.....	.....	Wm. Hood.
Blountstown	Calhoun		2																	C. L. Hobbs.
Bonifay	Holmes	111	8	81.0		95	10†	67	29	25	2.27	.....	1.74	0.0	3	1	11	19	ne.	Wm. Rush.
Brooksville	Hernando	126	17	81.2	+ 0.2	98	16	69	2	28	13.74	+ 4.43	2.50	0.0	13	11	15	5	.....	C. C. Peck.
Carrabelle	Franklin	10	13	81.6	+ 0.3	97	16	69	30	27	5.34	− 2.26	3.25	0.0	9	.....	.....	.....	.....	J. J. Blomquist.
Cedar Keys	Levy	10	12	82.2	+ 0.6	93	10	69	13†	18	10.74	+ 2.59	2.75	0.0	11	21	0	10	w.	J. B. Lutterloh.
Clermont	Lake	105	16	81.4	− 1.3	97	5	68	15†	27	11.95	+ 4.19	2.30	0.0	19	1	27	3	se.	S. S. Fesler.
DeFuniak Springs	Walton	193	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. W. Storrs.
DeLand	Volusia	27	13	78.6	− 1.9	89	4†	69	14†	18	11.93	.....	2.38	0.0	23	0	7	24	sw.	Dr. O. B. Webster.
Eustis	Lake	56	17	81.5	− 0.7	96	7†	69	14†	23	7.09	+ 0.21	2.35	0.0	19	13	13	5	se.	C. T. Smith.
Federal Point	Putnam	5	17	81.0	0.0	96	9†	68	18†	26	7.57	+ 0.28	1.39	0.0	20	7	20	4	se.	E. S. Hubbard.
Fenholloway	Taylor	75	3	80.6	.....	98	10	64	29	25	10.50	.....	2.40	0.0	9	0	16	15	sw.	Miss E. Wigglesworth.
Fernandina	Nassau	10	12	78.0	− 2.7	93	8	64	1	18	12.99	+ 7.33	3.32	0.0	19	14	6	11	se.	W. B. C. Duryee.
Fort Meade	Polk	125	17	81.2	0.0	96	6†	68	3†	28	7.14	− 2.21	1.07	0.0	18	11	13	7	se.	G. L. Broderick.
Fort Myers	Lee	12	17	79.6	− 1.6	90	6	69	14	19	10.73	+ 2.60	2.30	0.0	20	15	12	4	s.	Miss M. M. Gardner.
Fort Pierce	St. Lucie	6	18	79.3	− 2.4	93	2	67	13	23	12.60	+ 6.58	2.53	0.0	13	14	1	16	se.	T. J. O'Brien.
Gainesville	Alachua	176	23	80.4	− 0.8	96	30	69	14	24	9.32	+ 2.47	1.61	0.0	20	10	8	13	e.	J. P. H. Bell.
Grasmere[g]	Orange	175	13	89.0	− 1.9	93	5†	63	5	30	11.51	.....	3.15	0.0	19	21	6	4	.....	J. B. Escott.
Hilliard	Nassau	69	1	80.2	.....	97	10	68	14†	26	13.57	.....	2.21	0.0	16	12	13	6	.....	The Hilliard Co.
Homestead	Dade	5		80.9	.....	94	15†	67	9	25	8.57	.....	1.77	0.0	18	6	17	8	se.	W. J. Krone.
Huntington	Putnam	56	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Walker.
Hypoluxo	Palm Beach	4	9	81.8	+ 0.5	93	1†	68	1†	25	3.61	− 1.55	1.44	0.0	13	14	15	2	se.	G. A. Angevine.
Inverness	Citrus	43	8	79.7	.....	92	30	71	3†	17	9.75	+ 1.97	1.95	0.0	17	0	21	10	sw.	W. H. Miller.
Jacksonville	Duval	101	37	80.5	+ 0.4	95	10	69	13	20	5.82	− 0.39	1.58	0.0	21	6	13	12	s.	U. S. Weather Bureau.
Jasper	Hamilton	152	11	.....	.....	98	5	.....	.....	.....	10.26	+ 3.76	2.00	0.0	10	.....	.....	.....	.....	G. W. Duncan.
Johnstown	Bradford	125	14	80.6	− 0.7	97	10	68	13	24	10.90	+ 2.57	1.98	0.0	19	11	12	8	.....	A. M. C. Brasch.
Jupiter	Palm Beach	34	21	80.7	− 0.8	91	8	68	24	19	10.46	+ 4.61	4.91	0.0	21	8	23	0	se.	U. S. Weather Bureau.
Key West	Monroe	14	38	83.1	− 0.7	92	29	72	4	16	3.21	− 1.48	0.83	0.0	14	5	25	1	se.	Do.
Kissimmee	Osceola	65	17	82.5	+ 0.3	96	6†	70	6	26	7.38	+ 0.07	2.00	0.0	16	0	23	8	sw.	J. A. Simpson.
Lake City	Columbia	210	20	80.0	− 1.3	97	11	67	24	25	10.90	+ 4.58	3.18	0.0	12	1	13	17	e.	W. B. Knight.
Live Oak	Suwanee	109	8	82.9	.....	99	10	71	15†	24	10.61	+ 3.48	2.83	0.0	13	16	0	15	.....	D. O. Henry.
Macclenny	Baker	125	13	80.3[e]	− 1.6	97	10	68	13†	25	9.75	+ 3.03	2.45	0.0	10	.....	.....	.....	.....	Griffing Bros. Co.
Madison	Madison	200	6	80.6	.....	97	8†	68	14	24	7.92	+ 1.13	2.29	0.0	15	7	3	21	ne.	E. J. Vann.
Malabar	Brevard	24	8	80.4	.....	95	9	67	14	24	16.16	.....	2.45	0.0	17	13	13	5	se.	J. F. Farley.
Manatee	Manatee	8	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. P. Fuller.
Mariana	Jackson	80	9	80.0	.....	93	8†	68	23†	23	3.60	.....	0.77	0.0	9	17	5	9	sw.	W. J. Watson.
Meritts Island	Brevard	20	30	79.6	− 2.0	87	6†	70	13†	16	3.76	− 1.69	0.67	0.0	21	3	25	3	se.	F. Ulrich.
Miami	Dade	5	13	82.2	− 0.2	94	10	70	21	22	6.90	− 0.51	1.90	0.0	8	13	14	4	se.	E. V. Blackman.
Miami (Subtrop. Gar.)	...do	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Edwars Simmonds.
Middleburg	Clay	10	8	80.2[e]	.....	99	10	67	15†	27	14.78	.....	3.00	0.0	16	.....	.....	.....	.....	G. A. Chalker.
Molino	Escambia	49	8	80.8	.....	99	8	66	23†	29	6.17	.....	1.51	0.0	13	23	7	1	s.	W. H. Trimmer.
Monticello	Jefferson	207	4	81.1	.....	98	10	69	13†	26	5.02	.....	2.00	0.0	6	16	7	8	s.	E. C. Potter.
Mount Pleasant	Gadsden	260	5	79.7	.....	98	11	65	15	29	2.98	.....	1.33	0.0	10	.....	.....	.....	.....	Miss Addie Grubb.
Newport	Wakulla	.....	8	79.4	.....	93	10	69	7†	22	2.32	− 7.17	0.97	0.0	5	23	5	3	sw.	J. M. Ladd.
New Smyrna	Volusia	9	21	77.6	− 2.4	93	21	67	25	22	9.48	+ 3.64	1.30	0.0	22	.....	.....	.....	.....	F. Nordman.
Ocala	Marion	98	22	81.4	+ 0.1	95	8†	68	18	25	10.79	+ 3.13	2.25	0.0	15	1	15	15	.....	Dr. F. T. Schreiber.
Orange City	Volusia	39	19	80.6	− 1.7	98	6†	68	14	27	11.72	+ 5.09	1.98	0.0	20	7	11	13	se.	J. D. Graham.
Orlando	Orange	111	17	80.8	− 1.3	93	7	71	14†	20	6.36	− 1.06	0.91	0.0	22	3	10	18	e.	Jas. Thompson.
Pensacola	Escambia	149	31	81.2	+ 0.2	95	2	70	12	20	4.79	− 2.37	2.23	0.0	13	9	15	7	ne.	U. S. Weather Bureau.
Plant City	Hillsborough	121	17	80.4	− 0.9	94	4†	69	3†	25	10.99	+ 1.32	1.70	0.0	17	5	22	4	e.	E. B. Trask.
Rockledge	Brevard	28	1	80.0	.....	92	9	70	14†	20	9.66	.....	2.60	0.0	18	12	13	6	w.	Rev. J. H. White.
Rockwell	Marion	10	10	80.0[d]	.....	95	6	70	1†	24	9.94	+ 0.65	2.00	0.0	14	.....	.....	.....	sw.	Dunellon Phos. Co.
St. Andrew	Washington	14	14	83.1	+ 1.5	94	10	72	24	20	8.66	+ 0.21	2.66	0.0	15	18	11	2	e.	W. A. Emmons.
St. Augustine	St. Johns	10	59	79.6	− 0.9	93	8	63	3	23	8.64	+ 2.76	1.70	0.0	15	9	14	8	se.	J. R. Palmer.
Sand Key	Monroe		6																	U. S. Weather Bureau.
St. Leo	Pasco	140	14	80.2	− 1.6	94	6†	69	3	23	7.64	+ 2.36	2.48	0.0	19	2	20	9	s.	G. Schneider.
Satsuma Heights[g]	Putnam	98	1	80.7	.....	98	4†	68	14	28	10.66	.....	2.65	0.0	17	1	25	5	se.	The Satsuma Co.
Switzerland	St. Johns	10	13	79.4	− 0.9	94	10	68	14	19	12.00	+ 3.56	2.71	0.0	20	.....	.....	.....	.....	W. C. Steele.
Tallahassee	Leon	192	24	79.6	− 0.1	93	8†	69	13†	20	4.70	− 2.56	0.93	0.0	16	16	4	11	s.	W. H. Markham.
Tampa	Hillsborough	79	19	80.8	+ 0.8	92	6	70	13	20	6.39	− 2.20	2.07	0.0	16	3	20	8	ne.	U. S. Weather Bureau.
Tarpon Springs	...do	20	16	80.4	− 0.7	94	31	68	2	22	12.68	+ 2.97	6.34	0.0	14	17	7	7	w.	A. P. Albaugh.
Titusville	Brevard	6	17	80.4[f]	− 0.6	93	11†	69	13	22	.....	.....	.....	0.0	.....	.....	.....	.....	.....	F. M. Taylor.
Wausau	Washington	250	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Curtis Jones.
Alabama.																				
Alaga	Houston	105	5	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.26	0.0	6	13	7	11	e.	James L. Willis.
Anniston	Calhoun	741	19	77.7	+ 1.3	92	31	61	1	29	3.19	− 1.29	0.86	0.0	14	5	17	9	se.	U. S. Weather Bureau.
Ashville	St. Clair	685	17	78.2	− 1.5	95	29	60	23	32	1.06	− 3.12	0.60	0.0	5	15	11	5	w.	George R. Cather.
Auburn	Lee	732	28	80.2	+ 1.5	95	1†	65	9	28	6.07	+ 1.29	2.60	0.0	7	13	7	11	nw.	Dr. James T. Anderson.
Benton	Lowndes	149	9	.....	.....	.....	.....	.....	.....	.....	1.84	.....	1.12	0.0	5	22	5	4	ne.	S. T. Pruitt.
Bermuda	Conecuh	.....	23	80.6	+ 0.9	97	17	66	29	29	1.36	− 4.16	0.53	0.0	6	14	16	1	se.	M. J. Morris.
Birmingham	Jefferson	700	22	79.2	+ 0.5	92	19	66	9	25	4.60	+ 0.12	1.90	0.0	9	5	19	7	e.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for August, 1910. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama—Cont'd.																				
Calera	Shelby	500	9	.....	.....	.....	.....	.....	.....	.....	2.52	.....	0.80	0.0	5	0	28	3	e.	L. G. Privett.
Camp Hill	Tallapoosa	738	9	80.0	.....	94	1†	64	9†	28	3.46	.....	1.74	0.0	4	21	10	0	e.	Dr. Lyman Ward.
Cedar Bluff	Cherokee	594	6	.....	.....	.....	.....	.....	.....	.....	2.35	.....	1.00	0.0	5	24	7	0	.....	Joe L. Daniel.
Citronelle	Mobile	331	22	80.9	+ 0.4	93	9†	67	9†	28	3.87	− 2.44	1.17	0.0	11	18	8	5	s.	George A. Maloney.
Clanton	Chilton	590	17	79.6	+ 0.2	95	9	63	9†	32	2.38	− 1.47	1.30	0.0	11	15	2	14	se.	Wallace C. Edler.
Cochrane	Pickens	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.36	.....	0.90	0.0	3	22	3	6	e.	E. L. Rose.
Cordova	Walker	334	19	78.8	− 0.2	94	17†	63	2†	29	5.32	+ 0.84	3.00	0.0	8	16	12	3	s.	Scott Maxwell.
Cullman	Cullman	802	2	77.2	.....	93	3†	61	1†	29	4.58	.....	1.94	0.0	7	14	12	5	ne.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	5	.....	.....	.....	.....	.....	.....	.....	3.03	.....	1.21	0.0	6	15	6	10	e.	Dr. W. B. Fulton.
Daphne	Baldwin	.....	19	81.4	0.0	96	9	70	2†	24	3.74	− 4.47	1.05	0.0	10	12	11	8	sw.	John H. Young.
Demopolis	Marengo	.....	18	.....	.....	.....	.....	.....	.....	.....	1.24	− 2.76	0.86	0.0	4	25	3	3	sw.	George E. Pegram.
Eufaula	Barbour	200	26	78.6	− 1.4	93	19	64	29	27	1.42	− 4.07	0.48	0.0	6	19	3	9	se.	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	26	81.5	+ 1.3	98	8†	65	2†	31	2.06	− 2.93	0.80	0.0	7	17	0	14	n.	Robert L. Whitcomb.
Flomaton	Escambia	91	18	80.7	− 0.2	96	2†	67	13†	27	1.30	− 5.59	0.62	0.0	10	17	10	4	s.	T. J. Farris.
Fort Deposit	Lowndes	520	26	80.6	+ 0.5	97	18	66	23†	27	2.32	− 1.83	1.20	0.0	5	19	6	6	s.	J. F. Hattemer.
Gadsden	Etowah	621	26	78.4	− 0.6	93	29	64	24	27	4.56	+ 0.49	2.08	0.0	7	13	7	11	e.	D. P. Goodhue.
Goodwater	Coosa	826	15	78.8	− 1.4	95	2	62	23	29	4.37	− 0.89	1.40	0.0	7	24	0	7	sw.	D. S. Brown.
Greensboro	Hale	220	31	81.0	+ 1.4	94	3	70	2†	22	3.81	− 0.86	1.17	0.0	10	21	5	5	e.	W. E. W. Yerby.
Greenville	Butler	444	9	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.60	0.0	2	29	0	2	.....	E. M. Lewis.
Hamilton	Marion	.....	14	79.0[d]	− 0.9	96	1†	57	2	37[d]	4.07	+ 0.36	1.46	0.0	7	14	5	12	sw.	Prof. H. O. Sargent.
Highland Home	Crenshaw	.....	18	79.5	− 0.1	96	22†	62	1	28	1.97	− 2.93	1.34	0.0	3	21	4	6	ne.	Prof. Samuel Jordan.
Livingston	Sumter	160	26	81.2	+ 0.7	96	9†	64	2	26	0.36	− 3.60	0.19	0.0	3	28	0	3	e.	Robert L. King.
Lock No. 4	Talladega	510	13	78.8	− 1.0	95	3†	63	10	29	3.75	− 0.42	1.40	0.0	8	23	0	8	se.	U. S. Engineers.
Lucy	Houston	.....	5	79.8	.....	96	16†	63	29	30	1.91	.....	0.97	0.0	7	12	19	0	.....	A. L. Crosby.
Maple Grove	Cherokee	.....	17	79.2	+ 0.2	97	2	62	1	32	2.33	− 1.98	0.77	0.0	8	9	21	1	ne.	Mrs. A. L. Awbrey.
Mentone	DeKalb	1,595	3	.....	.....	.....	.....	.....	.....	.....	1.02	.....	0.40	0.0	5	.....	.....	.....	w.	E. Mason.
Milstead	Macon	.....	7	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.40	0.0	3	11	19	1	ne.	Evie Oswalt.
Mobile	Mobile	57	38	82.6	+ 2.9	96	3	72	7	21	5.10	− 1.71	1.80	0.0	12	12	15	4	n.	U. S. Weather Bureau.
Montgomery	Montgomery	240	38	80.7	+ 1.0	94	17	68	23	23	1.86	− 2.38	0.78	0.0	6	15	11	5	ne.	Do.
Newbern	Hale	.....	17	81.4	− 0.2	97	3†	66	2	29	5.33	+ 1.02	1.58	0.0	10	9	20	2	s.	Dr. J. Huggins.
Oneonta	Blount	857	16	77.1	− 0.6	93	2†	61	1	31	4.54	− 0.64	2.90	0.0	11	14	5	12	n.	Aquilla J. Ketchum.
Opelika	Lee	817	31	78.0	− 1.2	91	1†	62	23	25	3.98	− 0.51	2.00	0.0	5	15	6	10	e.	A. H. Read, jr.
Ozark	Dale	400	8	80.2	.....	95	11	67	13†	25	1.90	.....	0.40	0.0	7	20	10	1	n.	Miss Lucy Sellers.
Prattville	Autauga	281	10	79.8[d]	− 0.4	95	17	65	16†	28[d]	4.14	.....	1.32	0.0	6	18	13	0	w.	Jos. B. Bell.
Pushmataha	Choctaw	.....	19	81.4	+ 0.7	101	4	61	2	35	1.68	− 2.95	1.02	0.0	5	20	8	3	sw.	E. A. Carr.
Selma	Dallas	147	30	79.9	− 1.1	96	4†	64	23	30	3.22	− 1.20	1.46	0.0	6	21	6	4	e.	Charles F. Brislin.
Spring Hill	Mobile	312	6	81.7	.....	97	3†	69	13	26	4.87	.....	1.69	0.0	12	6	19	6	n.	Spring Hill College.
Talladega	Talladega	554	20	.....	.....	96	2†	.....	.....	.....	.....	.....	.....	0.0	.....	19	1	11	.....	Dr. Charles S. Northen.
Tallassee	Elmore	.....	19	.....	.....	.....	.....	.....	.....	.....	5.41	+ 0.65	1.78	0.0	9	17	3	11	ne.	P. A. Noble.
Thomasville	Clarke	385	19	79.6	− 1.2	97	16†	63	2	31	1.71	− 3.31	0.71	0.0	8	22	3	6	s.	J. G. Forster.
Troy	Pike	581	2	79.0	.....	92	11	66	12	22	1.71	.....	0.99	0.0	5	19	11	1	se.	C. S. Tutwiler.
Tuscaloosa	Tuscaloosa	230	29	80.8	+ 0.1	99	17	64	2	30	3.58	− 0.25	1.15	0.0	9	24	1	6	s.	W. S. Wyman, jr.
Tuskegee	Macon	.....	10	81.8	0.0	101	4	66	11†	30	1.39	− 1.78	0.94	0.0	2	2	27	2	n.	Prof. George W. Carver.
Union Springs	Bullock	216	23	80.6	− 0.1	93	16†	68	9†	24	1.41	− 3.54	0.60	0.0	3	5	26	0	e.	P. L. Cowan.
Uniontown	Perry	273	24	81.0	+ 0.3	97	16	67	2†	28	1.61	− 2.89	0.90	0.0	9	15	16	0	se.	F. D. Stevens.
Valley Head	DeKalb	1,031	25	77.8	+ 1.5	95	16	59	1	33	3.09	− 1.73	1.31	0.0	5	16	15	0	s.	M. T. Floyd, M. D.
Wetumpka	Elmore	205	18	80.7	− 0.7	95	17†	65	23	26	2.75	− 1.98	1.52	0.0	5	20	0	11	e.	U. S. Engineers.
Mississippi.																				
Aberdeen	Monroe	210	22	80.2	+ 0.8	96	18	62	2	32	3.49	− 0.44	1.35	0.0	6	18	8	5	s.	L. D. Godfrey, jr.
Agricultural College	Oktibbeha	424	20	80.0	− 0.5	96	17†	62	2	31	1.42	− 2.63	0.55	0.0	6	13	14	4	w.	E. R. Lloyd.
Bay St. Louis	Hancock	28	17	82.0	+ 0.4	95	10	70	6	23	6.53	− 0.56	2.25	0.0	7	18	11	2	se.	Brother Stanislaus.
Biloxi	Harrison	24	19	83.2	+ 1.5	98	1	70	11	24	6.45	− 0.39	2.79	0.0	10	18[a]	8[a]	4[a]	se.	Miss M. Josie Pope.
Booneville	Prentiss	504	16	79.0	− 0.2	95	17	61	2†	29	0.61	− 2.53	0.25	0.0	4	15	16	0	s.	Dr. D. T. Price.
Brookhaven	Lincoln	500	22	83.3	+ 2.1	99	3†	68	3	31	1.69	− 3.57	0.64	0.0	6	15	9	7	e.	W. J. Bee.
Columbia	Marion	110	6	.....	.....	.....	.....	.....	.....	.....	2.34	.....	0.78	0.0	8	21	4	6	nw.	N. R. Drummond.
Columbus	Lowndes	191	22	81.2	− 0.2	98	17†	61	2	31	4.06	− 0.20	1.98	0.0	5	21	4	6	ne.	J. B. Love.
Crystal Springs	Copiah	468	18	80.8	− 0.1	95	3†	67	3†	28	2.18	− 2.57	0.67	0.0	8	23	8	0	.....	D. H. Miller.
Edinburg	Leake	.....	2	80.6	.....	97	9	61	2	32	5.85	.....	2.10	0.0	8	14	9	8	s.	J. Y. Blocker.
Enterprise	Clarke	248	5	.....	.....	.....	.....	.....	.....	.....	3.80	.....	1.38	0.0	7	.....	.....	.....	.....	J. B. Thompson.
Fulton	Itawamba	.....	1	.....	.....	.....	.....	.....	.....	.....	3.22	.....	0.76	0.0	9	14	4	13	n.	A. L. Summers.
Hattiesburg	Forest	189	17	.....	.....	99	9	.....	.....	.....	3.58	− 1.63	2.02	0.0	6	19	0	12	s.	T. C. Spence.
Hazlehurst	Copiah	460	20	81.6	+ 0.8	99	17	65	3	33[c]	2.70	− 1.45	1.05	0.0	9	22	3	6	s.	J. D. Granberry.
Hickory	Newton	326	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. C. Hailey.
Jackson	Hinds	280	23	82.2	+ 1.4	99	31	66	2	30	1.98	− 2.30	0.89	0.0	12	18	7	6	e.	B. H. Klyce.
Lake	Scott	446	22	79.8	+ 0.6	95	17	60	2	32	0.96	− 3.84	0.40	0.0	4	20	7	4	sw.	Mrs. Eddie McNeel
Lake Como	Jasper	.....	7	.....	.....	.....	.....	62	2	.....	1.00	.....	0.60	0.0	3	18	10	3	s.	C. Thigpen.
Laurel	Jones	241	6	81.8	.....	98	17	65	2	31	2.02	.....	1.03	0.0	10	20	11	0	sw.	Thomas W. Flynt.
Leakesville	Greene	.....	16	82.8	+ 1.2	99	4†	67	2	29	2.68	− 3.39	0.70	0.0	6	26	3	2	.....	Dr. Sam Pool.
Louisville	Winston	561	21	80.2	+ 0.7	96	4	63	2	26	4.11	− 0.66	1.20	0.0	8	.....	.....	.....	.....	B. T. Webster.
McNeill	Pearl River	230	7	82.0	.....	97	3	70	10†	24	3.06	.....	0.95	0.0	6	9	20	2	se.	Prof. E. B. Ferris.
Macon	Noxubee	185	22	81.0	+ 0.2	97	17†	62	2	31	1.78	− 2.13	0.90	0.0	6	23	2	6	w.	Finis E. Carleton.
Magnolia	Pike	415	14	82.4	+ 1.0	98	13	68	30	28	3.42	− 3.02	1.80	0.0	11	8	21	2	s.	Miss Ruby V. Roberts.
Meridian	Lauderdale	375	20	79.7	+ 1.2	94	8	63	2	28	3.37	− 0.18	1.65	0.0	9	10	16	5	e.	U. S. Weather Bureau.
Merrill	Greene	76	5	.....	.....	.....	.....	.....	.....	.....	2.84	.....	1.00	0.0	6	20	3	8	e.	L. C. Helms.
Monticello	Lawrence	209	3	82.2	.....	99	17	65	3†	31	1.40	.....	0.45	0.0	10	11	20	0	e.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	22	80.4	− 0.6	97	18†	63	2†	31	3.87	+ 0.78	1.72	0.0	4	14	14	3	ne.	D. H. Shell.
Pascagoula	Jackson	15	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frederick Hess.
Pearlington‖	Hancock	10	22	81.9	+ 1.2	97	3	70	10†	24	9.96	+ 3.14	2.80	0.0	10	8[b]	19[b]	2[b]	sw.	Miss Annette Koch.
Porterville	Kemper	.....	5	80.8	.....	100	17	61	2	34	1.31	.....	0.39	0.0	5	9	20	2	sw.	I. S. Rea.
Shubuta	Clarke	197	5	.....	.....	.....	.....	.....	.....	.....	1.98	.....	0.84	0.0	4	.....	.....	.....	.....	Geo. A. Floyd.
Waynesboro	Wayne	191	23	80.2	− 0.2	96	3†	64	2	31	3.05	− 1.80	1.60	0.0	4	16	7	8	w.	R. S. Burke.
Woodland	Chickasaw	.....	1	.....	.....	.....	.....	.....	.....	.....	2.23	.....	0.84	0.0	6	.....	.....	.....	.....	Tallahatchie Drain. Com.
Louisiana.																				
Pearl River	St. Tammany	.....	5	.....	.....	.....	.....	.....	.....	.....	5.71	.....	3.02	0.0	12	25	5	1	w.	Geo. F. Bancks.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 2, South Atlantic and east Gulf States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Virginia.																																	
Arvonia	James	.14	.05		.02				T.		.48	.06		.18		.59	.15	.04	.19	.06	.26	.29			.05		.30		T.		T.	.01	2.87
Ashland	do								.22		T.		.06	.05	.23	.33	.08	.20	.24	.02		.19					.15		.10			.03	1.90
Buchanan[1]	do					T.								.04	T.				.05		.52		.14					.31				1.06
Callaville	Chowan				.04				.01					.10	.60	1.80			.69	.11							.36		.45	.67		1.29	6.12
Cape Henry	Coast		T.		.40				.14		.02			1.00	.06	.36	.05	.23		.12					.08		.29	.33	.33	.21	T.	.25	3.87
Charlottesville	James		.46						T.					.11	.01	T.		.09	.29	.10	.18	1.10	.02				44				T.	.20	3.00
Clarksville[1]	Roanoke			.45	.15							.64		.42	.12	1.02			.37		.06		.05			.30	.07	.22			.22	.45	4.90
Columbia	James				.05						T.						.04	.08	.08	.52		.47					.27					.10	1.61
Danville[1]	Roanoke		.08	T.	T.	T.			T.		T.			.16	.28	.78	.32	T.	.40	.05		T.	.11			T.		1.14			.51	.34	4.17
Diamond Springs	Coast				.55				17	.10		.03		.81	.13	.81	.15	.18		.19	.01				10			.08	.33			.07	3.77
Hampton	do				.57				40		T.			.20	.16	1.42	.03	2.20		.25					.57				.15	.15	.01	.22	6.33
Hot Springs[1]	James		.03		.06										.04		.12		.02	.13						.22	.18			.04	.02	0.86
Ivor	Chowan				.53				1.81		.04			.65		.32	.08	.15		.50					.15				.43	.08		.02	4.76
Lassiter	James				.05								.70	.05	.10	.05	.05	.10	.05	.03		.20			T.		.15					.35	1.88
Lexington	do								.01		.01		.35			.01			.08	.28		.04	.03			.01	.28					.25	1.35
Lynchburg	do	.04		.04	.05			T.	.06		.36		.04	.18	.01	.21		.05	.09	.01	T.	.23					.12				T.	.74	2.32
New Castle[1]	do							.04	.18		.10							.14	.05	.17	1.08							.97					2.73
Newport News	Coast				.41				1.68		T.			.29	.14	1.40	.18	1.12	.10	.28	.01				.60	T.	.01	.13	.14	.32	.02	.49	7.32
Norfolk	do				.77				.10		.03			.65	T.	1.32	.13	.16		.20					.10		T.	.05	.31	T.	T.	.23	4.05
Petersburg	James								T.	T.	.24			.83	1.33	3.30	.25	1.30	.27	.10					.19		1.00	.05	.36		.25	.18	9.65
Randolph[1]	Roanoke	.02												.40	.38	.16	.32			.04						.08		1.46				.12	2.98
Richmond	James	.02	.03	T.				T.	.17		T.			.27	.54	.17	.42	.16	.03	.01		T.					.62		.20	.01	T.	.25	2.90
Rocky Mount	Roanoke				.45				.04		.18				.06	1.18		.14	.08			.34				.17	.35				.10	2.04	5.03
Saxe	do		.21						.55		.08				.30				.12			.11					.91				.10	.45	2.83
Spottsville (near)	Chowan				.50				.11					.11	.11	.51	.08	T.	.80	1.15					.35		.04	.08	.27	T.	.11	.08	4.30
Williamsburg	James				.25				.55						.20	1.10	.48	.76	.15	.65					.15		.15		1.26	.25		.15	6.10
North Carolina.																																	
Beaufort	Bogue Sound					.24	.17	.10	.25			.35	.50	.45	.27	.54	.05			.35	.62		.02	.03	.32			1.02	2.06	.10	.37	.02	7.83
Belhaven	Pungo					1.70		.57				.14	3.00	1.80	.03	.07	.20		1.34	.17				1.49				5.84	.65	.08	.59	17.67
Brewers	Pedee	.04	.20		.17		T.	.31	.03		.03			.02	.02	.38			.07	.03		.03	.02			.37	.27	.07			.03	1.28	3.37
Caroleen	Santee																																
Chalybeate Springs	Cape Fear				.61		.19		1.28		.31		.23	.13	.57	.43			.31	1.50					.36	.10	.03			T.	.89	.70	7.64
Chapel Hill	do																																
Charlotte	Santee	1.01			.02		.05	.93			T.		.36	T.	.06	T.				.16		.17			.10	T.	T.			.01	1.49	.46	4.82
Chimney Rock	do	.08					.65	.24	.76		.07			.30	.08		1.00			.05		1.42	.04			.97	.04	.65			2.73	7.03	16.11
Clinton	Cape Fear																																
Durham (near)[1]	Neuse			.06	.28	2.10			.63		1.20			.45	.10	.27		.38	.30	.42						.10			.26	.64	.32	7.51
Eagletown	Chowan				.93				.10		.30			.25	.12	.20	T.	.22	T.	.05					.26	T.		2.30	.20	1.00	.16	3.31	9.40
Edenton	Albemarle Sound				.65						.70		.15	.60	.20	.65				1.00					.40			.70	.85	.65	.10	2.10	8.75
Enfield (near)[1]	Tar				.95	.15			.20		.87		.31			.71	.03	.22	.23										.38	1.03	.50	1.13	6.71
Fayetteville[1]	Cape Fear					.24		1.50	.78	.02		.01		.61	.06	.15				.32	.50					.98					.21	.17	5.55
Goldsboro[1]	Neuse					.02		.30	.50	.02		.80		1.40	1.45	.12	.33		.18	.50	1.70					T.		T.	.05	.10	.20	.53	8.20
Graham[1]	Cape Fear				T.		.63		.19					.27	.45	.87	.34		1.18	T.	.63		.07		.06	.08		.11			.20	.37	5.39
Greensboro[1]	do			.70	.04		.22		.85	.20					.27	.25	.40			.16		.17		.10		.43		2.00			.50	.50	6.79
Greenville[1]	Tar					.45		T.	.22			.58			.58	.77	.67		.03	.07	.96	.02				.18		.10	.19	.41	1.37	1.10	7.70
Hatteras	Pamlico Sound				.13	.76		.01	.08		.01	.01	.79	.61	.46	1.17	.96	.02	.01	.50	.04	.01	.01	.08	.04		.15	3.43	2.84	.16	.86		13.14
Henderson	Tar and Roanoke				.43				.41	.09		.92			.23		.71	.03	.16	1.24	T.					.15		T.	T.	.11	1.01	.37	.36	6.22
Kinston	Neuse					.13	.06	.60	.08			.05	.04	.55	.38	.25	1.66			.24					.60		T.	.17	.31		2.00	.10	7.22
Lenoir	Santee	.37	.32	.10	.18		.31	T.	.52		.76					.16	.20					1.48	.04			.09	.08				.89	1.23	6.73
Lexington	Pedee																																
Lincolnton	Santee							.52	.50					.10					.34		.25			.12		1.04			*	*	2.00	4.87
Louisburg[1]	Tar					.80	.22						.63			.45	.50	.71	T.		.65					.37			.50	.63	.30	5.76
Lumberton[1]	Lumber					.62		1.18	.90	.11			.17	1.21	.01	.68	.28	T.	T.			27				.03		.01		T.	.05	.53	6.05
Manteo	Roanoke Sound						.24		.98					.10	.46	.38				2.40	2.43				.12				.64	4.92	1.27			13.94
Marion	Santee	.03	2.24	.02			.26	1.18	.03				.04	T.	.04		.15			.03		1.19	.01				.15	.03			1.37	2.84	9.61
Moncure[1]	Cape Fear								1.35			.54		.12	.09	.01	.05			.02							.75				.11	1.06	4.10
Monroe	Pedee	T.			T.		.41		1.07		T.	.40		.14	1.10	.10				1.73											.29	.18	5.42
Morganton	Santee		1.45	.55			.04	.05	.31					.06	T.	.29	T.	.01				.42	.03			.38		.19			.98	1.43	6.19
Mount Airy	Pedee		.05		.79			T.	.03		.04	.19		.15	.06	T.				.12		.05				39	.65				44	.67	3.63
Mount Holly[1]	Santee		T.					1.60	.34						.26	.14					.90		.40			16	T.	.04			.12	.88	4.84
Nashville[1]	Tar					1.50	.06		.05	.16		.90		.92	.47	.16	.26		.41		.31					67		.18	T.	.58	.27	1.64	8.54
Newbern[1]	Neuse				.17	.37		.61	.78	.15		.10	.48	.07	.22	.20		.02		1.13	.68	.02				17		T.	3.70	T.	.88	.50	11.25
Pinehurst	Lumber						.65	.04	.70		.25		.10	.30	.95	.25				.10						10		.15			.83	.29	4.71
Pittsboro	Cape Fear				.10			.56			.30								.05	.10						20				.05	.40	1.10	3.06
Raleigh	Neuse				.01	.08		.34	.70		1.00		.07	.34	.04	1.49		.03		.38					.22				.01	.28	1.92	.84	7.75
Ramseur	Cape Fear			.02	.26				.66		.55		.05	.80	2.20	.01	.06	.20	.01		.07		.08					.03		.13	.58	.30	6.01
Randleman[1]	do				.03		.02		1.09					.02	.11	.10	.11		.23	.17	.18					.02		.12			.32	.39	2.81
Reidsville[1]	do		.12		.10				.04			.08		.05	.57	.16	.11		.15	.02			.02					.22			.17	.58	2.39
Rock House	Savannah		.64	.05	.13		.11	.07			T.			.22	.15	.16	.07	T.	1.43	.16			.09		.65	.38	.07			1.19	3.63	9.20
Rockingham	Pedee				.38		1.70	1.85			.28		.43	.18		.28				.43										.22	.50	.55	6.80
Rocky Mount[1]	Tar					1.11			.05			.96		.42	.02	1.53	.41											1.74	1.00	.06	.27	1.60	9.17
Roxboro	Roanoke			.20										.10	.26	1.70	.53	.12	.20			.10				.02	.84	.16		.11	.22	.37	4.93
Salem	Pedee		.65	.94				.36				.12	.38	.05	.06	.14				.15		.28			.08		.70			.08	.55	2.21	6.75
Salisbury[1]	do							.25							.20						.10		.81			.19	.08				.56	1.10	3.29
Saxon[1]	Roanoke		.45	.16							.44			.46	.22			.11		.43	.46				.15	.21		.01			.14	2.60	5.84
Scotland Neck	Tar				.86		.06		.17		.22		.17	.41	.47	.46	.10	.90		.10								.31	.34	.30	.09	.08	5.04
Selma	Neuse																																
Settle	Pedee	.32		.25				2.90			T.			T.	.25	T.				.17	.68			.15	T.			T.		T.	.78	.80	6.30
Sloan	Cape Fear				.62		.53	1.07	.32			1.78		.24	.37	.02		T.		.26					.39		.28	.15		1.63	.48	.25	9.39
Snow Hill	Neuse				.23		.97	.61	.44			.72	.27	1.21	.12	.20				2.19					.52				.80	1.85	.65	.70	11.48
Southern Pines	Cape Fear																																
Southport	do	.19				.34		.05	.34				.09	.80	.03	.56			.36	.16	.37				.90			.30			.75	T.	5.24
Statesville	Pedee	.52	.08				.07		.16											1.10		1.84	.14		.40	.15					1.45	.58	6.49
Tarboro[1]	Tar				.99				.04	.01	1.60			.40	.09	.27	T.		.10		1.13					.13		1.80	.17	.88	.15	1.31	9.07
Troy	Pedee																																
Weldon[1]	Roanoke					.63				.15		.21		.14	.71	.29	.21	.05	.02	T.	.64					.61			T.	.27	1.15	.01	5.09
Whiteville	Waccamaw					2.60	2.00	.60				.40	.02	T.	1.38	.50	T.									.35	.10		T.	.21	.68	.40		9.24
Willard	Cape Fear						1.39	1.27	T.			1.96		.58	1.63	.37	.30		.30	.50					1.02			.04	.27	1.04	.72	.90	12.29
Wilmington	do			T.	.06	T.	.10	.22				1.01	.13	.49	.07	.97	.08		T.	1.04			.01		.90		T.	.35	T.	.04	2.90	.06	8.47
Yanceyville	Roanoke																																
South Carolina.																																	
Aiken	Edisto																													3.05	1.38	4.43
Allendale[1]	Savannah					1.50		.24						.47					.07											2.50	.17	4.95
Anderson	do						1.31	.16						.31					.05	.02		.04			.25			.02			.37	.93	3.46
Batesburg[1]	Edisto		T.		T.	T.	.13	.87						.36					.16	.98	.16					.18				1.28	2.14	6.26
Blackville[1]	do				.84	.02			.02					.22				T.	T.		.06	T.				T.					.97	.74	2.87
Blairs[1]	Broad							.60	.20	.20				.52							.20					1.20					.90	.98	4.80
Bowman	Edisto	.26			.22		.15	.28					.41			1.02			.33	.24					.26					.21	1.83		5.21
Calhoun Falls[1]	Savannah							1.16																		.60						.55	2.31
Camden	Wateree					.02	.04	1.68	.20	.64				.02							1.20										.04	.64	4.48
Catawba[1]	Catawba					.06		.09	1.00			.06		.18							.72					.86		.02			.10	1.25	4.34
Chappells[1]	Saluda							.16																		.12					.90	4.04	5.22
Charleston	Ocean	.52	.02		.02								.55				T.	T.	T.	.36	.04	.86	.02	.01	.65	T.	.31	.79		2.10	3.75			10.00
Cheraw[1]	Pedee					.28		2.05	.18			.04		.20		2.93	.03		.97		.21						T.	.10			.52	.22	7.73

TABLE 2.—*Daily precipitation for August, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Carolina—Cont'd																																	
Clemson College	Savannah					.05		.32												.41		2.80										.40	3.98
Columbia	Congaree		T.	.18	.65	T.	.07	.22					.84	1.30	.03	T.		1.71	.41	.07					.04					.01	.92	1.75	8.20
Conway	Waccamaw					.32		.10	.25				.05	.15	.99	.42	T.	.50	2.06	.77	.60				T.	.39		.08	.13		.97	.83	8.61
Darlington	Pedee																																
Dillon	Little Pedee			T.		.84	.92	.39	.05		.01	.45	.10	.02		.16	.01	.27	.05	.65	T.				.07		T.			.10	.09	.51	4.69
Effingham	Lynches					.30	.40		1.20	.40			T.		.96	.30	T.		.98		.15										.25	.50	5.44
Ferguson	Santee				.29							.57	.64	.34				.08			.97										1.59	.51	4.99
Florence	Pedee					.32	.14	.31	.80	.25			.11		.20		T.		.89	.91	.10										.14	.18	4.35
Georgetown	Ocean			T.	T.	T.	.53	2.50	1.18				1.35		.82	.32				.46	.50		T.		.78		T.	.97		.78	1.66		11.85
Greenville	Saluda		.09			T.		.15	T.					T.									1.59			.18		.10			T.	1.65	3.76
Greenwood	do					.12	.34	.15						.23	.05						.28					.45					.70	1.55	3.87
Heath Springs	Wateree						.46	.89					.01	T.				.09							.05					1.40	.70	3.60
Jacksonboro	Edisto								.14	.25	.13		.80		.70		.11		.08		.81	.48			.25			1.10		1.00	1.03	1.36	8.24
Kingstree	Black					.20		T.	.94	.62		.55		2.15		.26	T.			.80	.75					.05					.80	.82	7.94
Liberty	Savannah				.80		.40				T.						.20		.10	.08		.20			.10	.05					.25	5.05	7.23
Little Mountain	Saluda				.30	.03	.89				T.		.75	.65				.05		.25					.20	T.				T.	1.60	.06	4.78
Meriwether	Savannah																																
Newberry	Saluda				.26		1.45							.18	.02			.66		.03					.27					.24	2.89	1.07	7.07
Pelzer	do					.48		.30													.54		1.52			.38					.10	1.38	4.70
Pinopolis	Cooper																																
St. George	Edisto			1.20	.14	.10								1.40			.05	.50	2.10	.50	1.40					.10					1.50	.50	9.49
St. Matthews	Santee		.20											.07	.03				.34		.85									.58	1.50		3.57
Saluda	Saluda	.77			.07		.18											.11				1.00				.28	.12			.10	3.35	2.00	7.98
Santuc	Broad	T.			.24	.01	1.07	1.31	.16		.02			.12						2.37					.35	.02		.02		T.	1.60	.38	7.67
Smith Mills	Pedee				.12				.13	.18		.24	.11	.17	.08		T.			.33						T.					1.16	1.88	4.40
Society Hill	do				.03		.11	1.11	.18				.07	.11		.18	.10			.24						.02				.54		1.10	3.79
Spartanburg	Broad							.40	1.62			.42		.10	T.	.08					.10		.18								1.63	3.40	6.46
Summerville	Ashley		.02	.37	T.	.38				.01		.92	.78	.20	.60	.01	.01		.08		1.95	.01	T.	.02	.12	.01	.15	.06	.01	.98	2.47	1.00	10.16
Trenton	Edisto							.11					.02	.18				T.	T.											.24	2.94	1.10	4.59
Trial	Santee	T.		.23	.37			.09			.22	.10	.30		1.10		.37	.11	.58	.80			.02		.03					*	2.62		6.94
Walterboro	Ashepoo	.53	.25	.05	.05	.93						.01	.86		.02		.55	T.	1.45	.12		.02			.02	.08	.07	.05		.69	1.29	.31	7.35
Winnsboro	Broad				.10		.20	4.77	.27		T.		.28							.17					.42				1.40	1.60	.30	9.51
Winthrop College	Catawba	T.			T.		.13	.04	.99			.33	.48	.87	T.					T.					T.			T.		.02	.35	1.67	4.88
Yemassee	Combahee	.08	T.	.23		.07				.33				2.07	.07	.02		1.00		.66	.06	.02	.33		.04	.34		.06	.52		1.28	.82	8.00
Georgia.																																	
Abbeville	Ocmulgee	.04		.05		.20			.09			T.		.04					.22		.18			T.				T.	T.	.39	T.	1.24
Adairsville	Coosa					1.20		2.70	.18		.17		T.						.32		.12					.04	T.					.16	4.89
Albany	Flint	.90			.03	.51						.10	.05	.02					.62	.02	.17										.02		2.44
Allapaha	Allapaha		.25	.17	.14					.09						.20					.43				.12	.08	.59	.14		.35		2.56
Americus	Flint	.40				.40								.15						.04	.07		.55										1.61
Athens	Oconee					.10	.05	.10	.40		.09										.50					.07	.14				.04	.92	2.41
Atlanta	Chattahoochee	T.			.53	.21	.05	.32					.01	T.		T.				T.					.06	T.					1.12	.19	2.49
Augusta	Savannah	T.		T.	.51			.04					2.46	T.			.25	.40		T.							T.	T.		.17	1.09	1.12	6.04
Bainbridge	Flint	.05	.11	T.	.04	.20			T.	.39					T.		T.	.13	.63		.38	.75			.28	2.02		.10	T.				5.08
Barnesville	do					1.74		.11					.34				.25		.02	.40					.01						1.25	.15	4.27
Blakely	Chattahoochee			.35	T.		T.		T.									.14	T.		.43										.13	1.05
Butler	Flint								2.16					.28							.42									.10		2.96
Camak	Savannah							T.	.30																					.75		1.05
Canton	Coosa					1.22	T.	.48																		T.			T.			.57	2.27
Carlton	Savannah					.51	.14	.83													.27											.58	2.33
Clayton	Savannah				T.		.83						T.		T.			.35	.06						.64	T.				T.	1.93	3.81
Columbus	Chattahoochee	.16			.03	1.76	.36	.02					T.	.52					.27	.23					T.	T.				T.	T.	3.35
Covington	Ocmulgee					.70	.05	.20	.40									.47			.35									.65	.80	3.62
Cuthbert	Chattahoochee					.10							24								.11										.49	0.94
Dahlonega	do			.05	1.23		.24	.17	.04		.01		.01	.30	.13				.11	.01					.02	.20	.02		.04		.12	4.87	7.57
Diamond	Tennessee				.92		.35	1.24			.14			.05					.05	.44			.10		.09	.10	T.					.50	3.98
Dublin	Oconee	.64			T.	.24		T.	.12	.06				.08					.04				.18		.08			T.		.70	.44	2.58
Dudley	do			T.	T.			.63					.13					T.				.24				T.		T.	.20	T.	1.20	
Eastman	Ocmulgee	T.		.04	.19	.25		.03				T.		.19					T.				T.					T.		.05	.02	0.77	
Eatonton	Oconee				.53			.05						.08					.46	.13					.71					.58	.45	2.99	
Elberton	Savannah				T.		.92	.18	.05											.50					.18	T.					.15	1.50	3.48	
Experiment	Chattahoochee					.40		.34					.35							T.	.16				T.	.45					.65	.01	2.36	
Fort Gaines	do	T.			T.	.12		.35				.80	.35						1.70	.10		.07				.45							3.94	
Gainesville	do					.30		.15	.27							.02										.15	.25					1.13	2.27	
Gillsville	Oconee				.40		.75	.30			.05			.40						.57			.10		.14	.45					.52	1.24	4.92	
Glennville	Altamaha	.06	.28	T.					T.				1.27		T.		.05			.03	1.05				.22		.02	.03	T.	.37	.15	.01	3.54	
Gore	Coosa				1.67		2.10	.38			.36		T.							.11					.05	.53					.14	.48	5.82	
Greensboro	Oconee					.22		.06	.04										T.		.12					.56					.16	.19	1.35	
Griffin	Chattahoochee					.50	T.	.12	.55				.25	.25				.25			.25					.60					.05	.95	3.77	
Harrison	Ogeechee							.23					.07				.62	T.								.14				.24	.36	.56	2.22	
Hartwell	Savannah						1.03			.19	.33		.28		.31				.35		.41				.21						.64	1.90	5.65	
Hawkinsville	Ocmulgee																																
Helena	do	T.	.05	.08	T.	.19		.01	T.	T.			T.				.47	.05	T.	T.	T.	.01			.03	.03	T.	T.		.28	.17		1.37	
Lafayette	Tennessee				1.34	.10	.31	.26	.24		.51					.57									.36							.17	3.86	
Lisbon	Savannah				1.72	.01	.30	.02					.02					.01					.15		.15						.35	.40	3.13	
Lost Mountain	Chattahoochee				.08		.18	1.38											T.	.80						T.					.10	.22	2.76	
Louisville	Ogeechee	.04			.22		.05	.32								.06		.46		1.11									.64				2.90	
Lumber City	Ocmulgee		.06											.08				T.			.32	T.			.12		T.	.42		.32		1.32	
Lumpkin	Chattahoochee			T.		T.	T.	T.					1.25								T.											.71	1.96	
Macon	Ocmulgee				.41	.04		.03	.19		.56		.39			.14				.05					.06						.42	.32	2.61	
Marshallville	Flint	.11				T.	T.	2.15	.15			T.	.35		T.	T.					.69		.10			.05	T.				.10			3.70	
Mauzy	Suwanee	.07						.01	.09					.13					2.40		.02				.13	.04	.08	T.	.05				3.02	
Milledgeville	Oconee				T.	.97	T.		.30				T.	.22					T.		.03				.17						.32	.05	2.06	
Millen	Ogeechee					.96		.10	.12			.10		.46							.70				.40						.41		3.25	
Montezuma	Flint								1.12				.06	.32							1.04				.08						.10	.42	3.14	
Monticello	Ocmulgee					.09	.10	.51	.05				.03	.07							.32					.15						.45	.28	2.05	
Morgan	Flint			.06	.15																											1.00	1.21	
Newnan	Chattahoochee					2.10		.15	.54				.85	.10					.03						.04						.05	3.86	
Norcross	do					.28	.02	.12	.04																.02	.01					.02	.96	1.47	
Point Peter	Savannah				.27		.60	.12												T.					.35						.55	.43	2.32	
Poulan	Suwanee	.05	.14	.06	.14				.04				.02					.87	.05	.38	.06							.01		.02			1.84	
Putnam	Flint					.50		1.26			.18		.50			.20			T.													.40	3.04	
Quitman	Suwanee	.25			.31					.98				.62					.09			.47			.63			.15	.39	T.			3.89	
Ramsey	Coosa				1.55	.10	.09	.34			.35				.10					.18					T.	.18					.27	1.10	4.26	
Resaca	do					1.40	.50	.35	T.	.50		T.								.15													2.90	
Rome	do					.20		.80	.62		.36										T.					.18						.14	2.30	
St. George	St. Marys	2.65	.07	.70			.18		.90	.49		.55			1.05	.05		T.				1.12	.04	.02	.47	1.49	.35	1.70	.30	.42	.70	.92	14.17	
St. Marys	do																																
Savannah	Savannah	T.	.05	.02				T.	.01			.01	.27			T.	T.		.48	.04	.46	.12	.05		.69	T.	T.	.72	T.	8.38	.41	.04	11.75	
Statesboro	Ogeechee		.57	T.			T.		.21				.75				.08		.09	1.62		.15			.32		.23	.27	T.	1.93	.15	.44	6.81	
Talbotton	Chattahoochee				.75	2.15		.17					.40					.02			.76										.14	1.25	5.64	
Tallapoosa	Coosa					1.50		.79	.44		.17		.15							.05												.09	3.19	
Thomasville	Ocklockonee	T.	.03	.20		.17		.27	.02				.02	.54		.04	T.		.40		1.41	.01	T.	1.08	.33		T.	T.	T.	T.	.03			4.55	
Toccoa	Savannah					.10	.60	.80	.14					.95							.43					.07	.15				.10	3.20	6.54	

TABLE 2.—*Daily precipitation for August, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Georgia—Cont'd.																																	
Valdosta	Suwanee	.35												1.50						T.		1.50			.45	.35		.45	T.				4.60
Valona	Ogeechee												.62	2.65					T.	1.65	.45		T.	T.	1.60			2.05	.10	1.40			10.52
Washington	Savannah														.09	.48					T.										.82	2.02	4.28
Waycross	Satilla	.53	.65	2.10		.25	.20	.42	T.	.53				.23	.13						.15	.30			.85	.38	.01	.06	.07	.01	.18	.82	7.00
Waynesboro	Savannah				T.	1.05			.72					.02					3.25		.40	.02			T.		.02			1.00	.10	6.58
West Point	Chattahoochee					1.26		.96	1.26				.54	.58					1.50	.08					T.	.02		.01		T.			6.21
Woodbury	Flint						.50						.45	.31							.50										.11	.03	1.90
Florida.																																	
Apalachicola	Coast		2.00	.78					.02											.10												2.90
Arcadia	Peace Creek	1.09	.47	.04		.04	.05	.12	.13	T.	.03	.12		.60	.10	.34	T.						.54	.12	.02	.11		1.32	.08	.50	1.43	.01	7.26
Archer	Waccasassa		.40	1.05	.60		.50				.05		.40	.50		.20		.60	.75		1.50		.25			.10		.15	.10		1.40		8.55
Avon Park	Kissimmee	.02	.11	T.		.08	.69	.16	.63	.62	.07	1.03	.02	.30	.61	.05			T.		.36	T.	.80	1.05	.70	.05	.30	.30	T.		.24	.13	8.32
Bartow	Peace Creek	.45		.34				.45	.35				.60	.20								.23	1.00				.23	.05	2.08	.25		.43	6.66
Blountstown	Apalachicola																																
Bonifay	Choctawhatchee			T.	T.			T.	T.		.20		1.74					T.				T.		.33	T.	T.						2.27
Brooksville	Withlacoochee	.75	1.65			.22						.65		1.15		.30		.45			2.50		.32	1.40	.70		1.70				1.95		13.74
Carrabelle	Coast		.22	.14					.18				.85								.25			.30	3.25	.10		.05				5.34
Cedar Keys	do	1.84	.56									.03	.92	2.75	1.12									.69	1.05		.06	1.67				.05	10.74
Clermont	Lake	.20	1.10			.20	1.50	.50		.42	.40	1.35			.80		.24	.70	.24			.75		.30	.35	.10	2.30				.30	.20	11.95
De Funiak Springs	Choctawhatchee																																
De Land	St. Johns	.66	.14	.01			.01	2.38	.25	.02	.17	.44	T.	.18	.10	.08	T.	.03	T.		.97	1.36	.60	.87	.16	.16	1.04	1.94	.34	T.	T.	.02	11.93
Eustis	Lake	.19	.10			.17	.27				T.	.20	.25	.31	.22		.63		.30	.10			.21	2.35	.10	.05	.72	.54	.18			.20	7.09
Federal Point	St. Johns	1.08	.03				.02				T.	.80	1.10	.67		.08		.06	.97		.20	.04	.19	.08	1.39	.06	.08	.03	.63	.03	.03		7.57
Fenholloway	Fenholloway	1.50										1.80	.40	.60					.50		2.40		.20	1.90	1.50								10.50
Fernandina	Coast	2.20	.03				1.15	.02		1.10		.04	.72	.09			.14				.29	.23	T.	.06	.39	.19	1.27	1.15	3.32	.58	.04		12.99
Fort Meade	Peace Creek		.42				.04	.78	.49	.12	.15	.54		.39	.68						1.00	.05	.62	.55	.10	T.	.63	.14	T.		.20	.24	7.14
Fort Myers	Caloosahatchee	.34	T.		T.	.45	2.30	.04	.03	T.	.70	.04	.60	2.01	.75	.21	.34	T.	.20	.10	T.	.50	.16	.32	T.	T.	T.	T.	.50	.28	.86	T.	10.73
Fort Pierce	Indian	.86		1.04			T.							2.53	2.25	.37	.31		.39				2.43	.94	.21		.69	.06		.52		12.60
Gainesville	Lake	1.61	.02	.06			T.	.04		.04		1.04	.23	.20	1.04	.86		.06			.66	.43	T.	.16	1.14	.06	.05	.36	.48		T.	.78	9.32
Grasmere	do	.86	.88		.02		3.15	.46		T.	T.	2.40		.07	T.	.14		.07	.59		.07	T.	.05	.52	.07		.89	.16	1.00		.04	.01	11.51
Hilliard	Nassau	1.15	.30						.08			T.	.73	.82						45	1.81	1.00	.50	2.21	1.00	.10	.50	.58	.49	T.		1.85	13.57
Homestead	Coast	.53			.88	.04						T.			1.05	.56		.02	.24	.02	.65	.13	.88	T.	1.77	.08	.13		.11	1.26	.01	.21	8.57
Huntington	St. Johns																																
Hypoluxo	Lake			.02			.03	.03			.02				.67	.17	.25	.48			.10							1.44	.04	.25	.11	3.61
Inverness	Withlacoochee	1.00	.35				1.50			.40	.03	.63	.67	1.00			.05	.28		.60	1.95	.05	.29	.42	.20					.33		9.75
Jacksonville	St. Johns	T.	.42	.04		.01	.02		.06		.03	.01	1.11	.49	T.	T.		.02	T.	.13	1.12	T.	.08	.24	.15	.01	.13	.11	.76	.23	.65		5.82
Jasper	Suwanee				.92				.85				.71					1.00			1.25			2.00		.75	2.00	.30			.48	10.26
Johnstown	do	1.98	.32						.66			.66	.47	.71			.04			.02	.98	.05	.76	1.00	.68	.11	.77	.02	.02	1.38		.27	10.90
Jupiter	Coast	.02			.12			.01				.65		.15	.06	2.11	.19	.01	.03	.03				.31	.50	.99	.06	.10	4.91	.05	.01	.11	.04	10.46
Key West	do	.14		.65	.03	.19			.19		.15			.37	.23	2.00	.16	T.			2.00	.10	T.	.16	.40	T.	.23	.30				.14	7.38
Kissimmee	Kissimmee	.12	T.			.58	.06	.23	T.		.30	T.																					
Lake City	Suwanee	2.22	3.18		T.		T.	T.					.42	1.87	.60			T.			T.	.76	T.		.10	.04		.73	.08		.62	.28	10.90
Live Oak	do	.43	.57							.15			.60	1.23	.09			.97				2.83			2.09	.13		1.16	.10			.26	10.61
Macclenny	St. Marys	2.43	.23						.13			.20		2.00							2.40				.85	.55				.34		.58	9.75
Madison	Suwanee	.23	.04	.27	T.					.03			.03	2.29	1.90	.17		T.		.04		.94			.53	T.		.16	.88		.28	.11	7.92
Malabar	Indian	1.80				1.34		1.06	1.03	1.15				1.07	.42		2.45					.03	.85	.15	.10	1.20	1.80	.98		.56	.17		16.16
Manatee	Manatee																																
Marianna	Apalachicola	T.			.30	.34			T.	.67			.33	.33	T.				.74	T.		.04			.77	.08	T.						3.60
Merritte Island	Indian	.09	.16	.67					.24	.11	.04	.03	.10	.46	T.	.04	.04		.04		.30	.16	.04	.54	.03	.25	.19			.21	.02	T.	3.76
Miami	Coast														1.90	T.		T.		.70	1.30		.10	T.	.35				.42	1.51	.62	T.	6.90
Miami (Subtrop. Gar.)	do																																
Middleburg	St. Johns	3.00	.60	.10							.90	2.90	2.00	1.10							.30		.25	.75	1.65	.30	.33			.15	.35	.10	14.78
Molino	Escambia			.30	.70	.10		.15	.25			.12	1.51							.25	.71	.28			.98	.60						.22	6.17
Monticello	Aucilla		1.65						.37					.35							.27			2.00		.38						5.02
Mount Pleasant	Apalachicola	.04	.03	.10				T.					.10	T.				T.		T.	.03	1.33			.92	.30	T.	.08				.05	2.98
Newport	St. Marks								T.			T.		.32			.97	.33			T.	T.	.19			.51	T.	T.					2.32
New Smyrna	Coast	.50		1.30				.18	.20	.08	.84	.16	.86	.32	.24	.20	.54	.04				.38	.35	.65	.90	.22	1.18	.03	.04			.27	9.48
Ocala	St. Johns	1.65	.65	T.			.20	T.	.22		.10	.15	.13	.63	.52	2.25	T.		.05				1.80		1.25		.13		1.06	T.			10.79
Orange City	do	.62	.42				.58		.38	.15		.39		1.98	.86		.02	.04			.64	1.67	1.24	.21	.27	.12	.73	.14	1.24	.02			11.72
Orlando	do	.43	.23			T.	.15	.34	.57	.11	.10	T.	.12	.15	.52	T.	.63	.03			T.	.13	.04	.36	.46	.45	.56	.46	.33	.04	T.	.15	6.36
Pensacola	Coast			.03	.12	.09	T.	.02	.45				2.23					.08			.36	.12		.01	.60	.60	T.				.08	4.79
Plant City	Hillsboro	.57	1.40			.36		.50	.40		.64	.65	1.05	.60	.60						.85	.15	.34		.14		1.70	.95		.09			10.99
Rockledge	Indian	.43	.32	.63				.82				.13		1.15	.08	.07						2.60	.37	1.13	.03	.35	.35	.13	.27	.70	.10		9.66
Rockwell	Withlacoochee	2.00	.43			.10						T.	1.50	1.25		1.40		.08	.15		.25	*	.73	.25	.65	T.			.35	.80		9.94
St. Andrew	Coast	.12		1.36	.63	.02		.19					.16	.02			.81	.16				.15	.02	.79	1.39	.18					2.66	8.66
St. Augustine	do	1.13	.52	T.	.15				.08		T.	1.35	.81	1.70		.51					.10	T.	.90	T.	.25			T.	.56	.16	.16	.26	8.64
Sand Key	do																																
St. Leo	Withlacoochee	1.22	2.48			.35		.06	.04	T.	.28		.98	.04	.02	.08	.10	1.09			.04	.12	.11	.08	.46	T.	.08			.01			7.64
Satsuma Heights	St. Johns	2.22			.05		.67				.36	2.65	1.03	.11	.26		T.	T.			.91	T.	.20	.27	.37	.21	.88	.05	.32		.10	T.	10.66
Switzerland	do	.20	1.20			T.	.46	.26		.07	.22	2.71	.27	.65				T.	.43	1.49	.06	.49	.93	1.05	.09	.07	.05	T.	.06	1.24			12.00
Tallahassee	Ocklocknee	.95	.03	.05	.20		.15		T.	.55			.05	.50	.20			.20	.03	.45		.03			.90	.38			.03				4.70
Tampa	Coast	2.06	1.37							T.	T.	.15	.01	.30	.37		T.	.01	.02		.37	T.	.02	.59	.77	T.	.01	.11			.19	.04	6.39
Tarpon Springs	do	3.07	6.34								.56	.52	.18	.57	.03				.16			.02	.18	.14	.07		.04				.80	T.	12.68
Titusville	Indian																																
Wausau	Choctawhatchee																																
Alabama.																																	
Alaga	Chattahoochee	T.				.12		T.	.26	.08		T.	.10		T.	T.			.02	T.		.20				T.	T.						0.78
Anniston	Coosa			.19	.40	.07	.29	.59		.48	.06		.30		.17			.40			.08						.02	.03			.11		3.19
Ashville	do		.04		T.	.10	.12	.60					.20														T.						1.06
Auburn	Tallapoosa				T.	1.69	.07	2.60					.98						.12	T.	T.					.55				T.	.06		6.07
Benton	Alabama							1.10	.02				.48	.06								.18				T.	T.						1.84
Bermuda	Escambia		T.			.10		T.				T.	.27				T.	T.				.33			.02	.11					.53	1.36
Birmingham	Black Warrior		.10		.43	1.09	1.07	.12		.52	T.	.05	.99																		.23	T.	4.60
Calera	Coosa			.60		.30					.80		.72														.10						2.52
Camp Hill	Tallapoosa					.75	1.74				.08		.89													T.							3.46
Cedar Bluff	Coosa				1.00		.15	.05	.70											.45													2.35
Citronelle	Alabama				.05	T.		T.	.11	1.06	.36	.80	.29	.02					.75	.06					.23	.14							3.87
Clanton	Coosa	.05					.03	.05	.06		.56		1.30	.20							.02				.08	.01						.02	2.38
Cochrane	Tombigbee						.90						.10													.36							1.36
Cordova	Black Warrior				.75	.14	3.00	.42		.32		.57	.10												T.							.02	5.32
Cullman	do				T.	1.61	1.94	.61		.22	.02									.15			T.		.03							T.	4.58
Dadeville	Tallapoosa					.65	.14	1.04	.17		T.		.89	.14					T.	T.	T.												3.03
Daphne	Coast			1.00	.05			.10		T.			.12	T.				T.	.05	T.		T.	.40		.15	.77	1.05					.05	3.74
Demopolis	Tombigbee							.86			.14											.04					.20						1.24
Eufaula	Chattahoochee	.20					T.	.36	.34				T.	.48					.02			T.	T.			.02							1.42
Evergreen	Escambia								.31				.10	.12					.48			.80				.10	.15						2.06
Flomaton	do				.13	.05			.06	.03		.05	.20						.62		.03			.08	.05								1.30
Fort Deposit	do	1.30						.30					.15	.30								.37	T.										2.32
Gadsden	Coosa			.48		2.08		1.12	.14		.58									.06											.10	4.56
Goodwater	do						.60	.70	1.40		.65		.60		T.					.30	.12										T.	4.37
Greensboro	Black Warrior					.14	1.17	.03			.58			.08					.03			.89				.12	.50	.27					3.81
Greenville	Escambia												.60						.10														0.70
Hamilton	Tombigbee					1.46		.62	.07		.43	.08								1.25		T.							.16		T.		4.07
Highland Home	Escambia												1.34						T.	.18					T.						.45		1.97

TABLE 2.—*Daily precipitation for August, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Alabama—Cont'd.																																	
Livingston‖	Tombigbee					.19																	.09				.08						0.36
Lock No. 4	Coosa				.02	.32	.51	.22		.92			.32								1.40										.04		3.75
Lucy	Chattahoochee			.16	.97		.03	.02	.05					T.				T.			.53				.15	T.		T.				T.	1.91
Maple Grove	Coosa			T.	.45		.77	T.		.57		T.	T.				.04	.24	.13	T.					.05					T.	.08	2.33
Mentone‖	...do				.10	.40	.12	T.	.10		.30																					1.02
Milstead‖	Tallapoosa	T.											.28	.12												.40						0.80
Mobile	Coast				T.	.59	.03	.31	.46			T.	1.80					T.	.03		.04		.02		.04	.77	.39					.62	5.10
Montgomery	Alabama				.39	T.	.60	.02		T.		T.	.78					T.	T.	T.	T.				T.	.03	T.				T.	.04	1.86
Newbern	Black Warrior				.57	.61	.17			1.58		T.	.04					.13			.62	.01				.59	1.01						5.33
Oneonta	...do		T.		.04	.09	2.90	.22	.01		.90		.21								.04					.05					.04	.04	4.54
Opelika‖	Tallapoosa					.81		2.00					.42	.60					.15								T.						3.98
Ozark‖	Coast					.40							.30	.10					.35			.35				.15	.25						1.90
Prattville	Alabama					.35	1.32	.75					.41							.36	.95										T.		4.14
Pushmataha‖	Tombigbee						.02	1.02	.01		.19		T.									.44					T.				T.		1.68
Selma‖	Alabama						.20	1.02			.36		T.	.06							1.46	.12											3.22
Spring Hill	Coast					.01	.05	.60	.31				.46	.08					.03		.22		.03			1.69	1.36					.03	4.87
Talladega	Coosa																																
Tallassee‖	Tallapoosa	.02				1.27	1.78	1.33	.12				.12	.57					.08		T.											.12	5.41
Thomasville‖	Tombigbee	.18				.03	.14	.02	T.		T.								.55			T.				.03	.05						1.71
Troy	Escambia				.40		T.						.99						.10						.05							.17	1.71
Tuscaloosa‖	Black Warrior	.90				.53		.43	.02		.20		.15								1.15						.02	.18					3.58
Tuskegee	Tallapoosa				T.	.45	T.	T.					.94	T.																			1.39
Union Springs‖	...do	.41						.40				T.		.60					T.														1.41
Uniontown	Black Warrior				.02	.07	.03				.35		.02					T.		T.		.90				.03		.18			.01		1.61
Valley Head	Coosa				.54		1.31	.11		.63										T.						T.						.50	3.09
Wetumpka‖	...do							1.52			.25		.40	.27																		.31	2.75
Mississippi.																																	
Aberdeen‖	Tombigbee							1.35	.21		T.		.34									.04	.60		.95								3.49
Agricultural College	...do						.06	.04			.05	.48									.24		.55										1.42
Bay St. Louis	Coast						.05		T.		.53		T.	1.49					T.	.03		.53			2.25	1.65							6.53
Biloxi	...do				.37				.03			.07	.51						.02			.48	.08		1.40	2.79					.70	6.45
Booneville	Tombigbee				T.			.21		.03		.12												.25									0.61
Brookhaven‖	Pearl					T.	T.	T.							.50				.01	.64		.01					.06	.47		T.			1.69
Columbia‖	...do					.20			.16		.06								.06			.64			.06		.78	.36					2.34
Columbus‖	Tombigbee	1.25				T.	T.	1.98	.27		.19		T.	.37						T.	T.	T.							T.					4.06
Crystal Springs‖	Pearl					.22			.23									.04		.34	.26	.67				.25				.17			2.18
Edinburg	...do				1.02	T.	.32		T.	.08		T.				.88	T.				.51		2.10		.08	T.						.86	5.85
Enterprise‖	Chickasawhay	.05			.84	.50														1.38		.53					.05	.45					3.80
Fulton‖	Tombigbee					.48		.54	.16				.40							.06	.02	.76	.74	.06										3.22
Hattiesburg‖	Leaf	2.02									.42		.66						T.	.12		.22					.14						3.58
Hazlehurst‖	Pearl							.82	.04						.05	.02	.03			1.05		.37					.26	.06					2.70
Hickory‖	Chickasawhay																																
Jackson	Pearl	.01			.45	.89	.32	.03		.03	T.	T.	.02			T.	.01				.14	.02		.01		.05		T.	T.	T.			1.98
Lake‖	...do	.15				T.	.40	T.			.17											T.			.24	T.							0.96
Lake Como	Leaf					.60	.20	T.											T.	T.			T.			.20							1.00
Laurel	...do	T.			T.	.01	.06	.05		T.	T.		T.			.01	T.		.53	.03	1.03	.14				.13	.03						2.02
Leakesville‖	Chickasawhay	.35				.50					.40		.60	T.					.70	.13													2.68
Louisville	Pearl				1.20	.93				.20		.41									.86	.05		.41							.05		4.11
McNeill	...do				T.	.15				T.	.79		T.					T.	.20	T.		.60			.95	.37						3.06
Macon‖	Tombigbee	.40				.18	.10	.90	T.		T.		.17									.03					T.						1.78
Magnolia	Pearl				.04	.01	T.	T.						1.80	.10			T.	.12	.64	.05	.48		T.		.13	.02		.03	T.			3.42
Meridian	Chickasawhay				1.65	.28	.53	.02		.45		.25	T.							T.	.08					.10	.01						3.37
Merrill‖	Pascagoula	.10							.22		.10									1.00		T.		T.			.84	.58					2.84
Monticello	Pearl				.42		.03			T.		.02	.02						.13	.01	.02	.17			.45		.13						1.40
Okolona‖	Tombigbee						.80	1.15	.20				1.72												T.								3.87
Pascagoula	Coast																																
Pearlington	Pearl						.31		1.86	.38	2.80		.77	.78						T.	.41	.17	T.			2.10	.38						9.96
Porterville	Tombigbee				.30		.39					.15									T.					.38	.09						1.31
Shubuta‖	Chickasawhay							.14		.18	.84											.82											1.98
Waynesboro‖	...do				T.	T.	T.				.95		.40	T.							T.	1.60					.10	T.					3.05
Woodland	Tombigbee						.25					.45								.37	.25	.07		.84										2.23
Louisiana.																																	
Pearl River‖	Pearl					.01	.02			.86	.04	3.02		T.			.04		T.	.02	.02		T.	.04			.88	.14		.62			5.71

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 2, South Atlantic and east Gulf States.*

Date.	Virginia.						North Carolina.																		South Carolina.												Georgia.											
	Lynchburg.		Norfolk.		Richmond.		Saxe.		Charlotte.		Edenton.		Fayetteville.		Hatteras.		Newbern.‡‡		Raleigh.		Reidsville.		Salisbury.		Wilmington.		Charleston, S. C.		Columbia.		Conway.‡‡		Georgetown.		Greenville.‡‡		Newberry.		Society Hill.		Trial.		Adairsville.‡‡		Albany.‡‡		Atlanta.		Augusta.		Dahlonega.		Macon.		Savannah.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	83	62	85	66	85	62	86	64	86	66	84	66	86	68	84	72	86	70	86	68	86	66	86	68	88	70	84	74	88	71	88	72	86	72	88	71	88	71	87	68	88	72	88	72	88	72	88	72	88	72	86	72
2	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
3	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
4	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
5	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
6	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
7	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
8	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
9	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
10	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
11	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
12	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
13	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
14	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
15	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
16	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
17	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
18	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
19	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
20	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
21	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
22	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
23	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
24	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
25	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
26	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
27	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
28	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
29	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
30	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
31	84	62	86	66	86	62	86	64	86	66	86	66	86	68	86	72	86	70	86	68	86	66	86	68	88	70	86	74	88	72	88	72	86	72	88	72	88	72	88	68	88	72	88	72	88	72	88	72	88	72	86	72
Mns	83.8	62.4	85.8	65.8	85.8	62.0	86.0	64.2	86.0	65.1	85.8	64.2	86.0	66.8	85.8	71.4	86.0	68.9	86.0	66.3	86.0	65.6	86.0	66.2	87.9	70.3	84.7	74.7	88.0	71.9	88.0	72.0	86.0	72.0	88.0	72.0	88.0	71.9	87.1	69.9	87.0	70.5	88.0	71.4	88.0	71.7	88.0	71.5	88.0	72.0	86.0	72.0

‡‡ Observations at 7 a. m. and 7 p. m. only.

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 2*—Continued.

Date.	Georgia.						Florida.																			
	Thomasville.		Waycross.‡‡		West Point.‡‡		Avon Park.		Fort Meyers.		Gainesville.‡‡		Jacksonville.		Jupiter.		Key West.		Miami.		Orlando.		Pensacola.		Tallahassee.‡‡		Tampa.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	90	72	90	72	95	69	86	.....	82	70	84	71	86	73	88	73	87	75	90	71	84	72	91	74	90	72	81	71
2...	89	74	89	74	91	72	88	.....	85	70	84	74	86	73	87	73	89	76	91	76	83	73	95	76	83	73	84	72
3...	86	73	89	73	90	74	92	.....	89	73	89	70	89	71	87	72	89	72	91	73	90	73	87	77	85	73	88	72
4...	90	72	92	72	92	75	92	.....	89	74	91	72	90	75	86	77	88	72	91	79	91	74	83	78	89	74	91	75
5...	91	71	93	72	88	70	94	.....	87	73	91	71	91	74	86	77	88	76	92	71	92	72	83	76	88	72	88	75
6...	92	70	94	72	91	71	92	.....	90	72	92	72	94	76	87	77	89	80	92	79	92	73	84	80	90	72	92	75
7...	93	70	95	73	89	72	93	.....	86	72	90	72	93	75	88	76	89	80	91	72	93	74	86	80	92	72	90	75
8...	94	72	96	74	89	72	92	.....	89	72	90	72	93	76	91	76	87	78	92	73	92	73	92	72	93	73	91	77
9...	95	70	96	73	90	66	94	.....	88	73	92	75	94	75	90	76	88	77	93	71	89	75	90	78	92	72	90	79
10...	96	70	97	72	92	68	90	.....	88	74	93	76	95	76	89	76	91	76	94	74	89	75	90	76	93	73	88	76
11...	95	70	97	74	91	68	90	71	87	73	90	73	90	75	85	76	89	79	92	80	91	72	87	77	92	74	91	71
12...	81	71	88	72	80	67	91	72	88	73	86	70	86	70	87	78	89	80	93	80	89	72	85	70	86	73	89	72
13...	81	69	79	70	85	67	89	72	84	71	87	71	78	69	86	73	89	79	92	74	83	72	85	72	85	69	79	70
14...	87	68	90	69	88	67	86	71	81	69	87	69	86	71	86	75	91	78	90	71	88	71	86	75	85	70	86	71
15...	92	68	92	68	91	68	88	73	80	74	88	71	87	73	85	72	91	79	92	74	90	73	88	76	89	70	89	76
16...	93	71	95	68	94	68	90	73	84	73	91	72	88	71	86	71	89	79	90	73	90	73	88	76	91	72	87	74
17...	93	70	95	70	93	70	92	72	87	71	90	71	88	74	86	71	89	81	90	74	91	73	88	78	90	71	88	73
18...	92	67	95	71	90	69	92	75	89	73	90	71	90	73	88	78	87	76	91	73	90	72	85	75	89	70	92	74
19...	92	70	95	72	95	71	92	70	87	72	90	73	90	74	87	74	90	78	92	73	91	72	86	76	90	72	89	74
20...	93	71	94	71	91	71	90	72	87	75	90	74	90	70	88	74	88	73	89	71	89	73	89	76	91	73	88	74
21...	87	70	88	69	89	70	90	71	87	73	86	71	83	71	90	74	87	74	92	70	87	72	84	72	88	71	87	72
22...	88	69	94	68	87	67	87	72	79	72	87	72	86	71	86	74	89	77	87	73	87	73	87	75	87	70	84	73
23...	87	69	90	70	87	66	85	70	83	74	89	71	87	72	87	70	89	79	92	73	83	73	87	74	85	71	85	71
24...	78	70	82	68	86	68	88	70	89	70	86	70	84	72	87	68	89	77	90	71	86	71	80	73	80	69	89	72
25...	86	70	91	70	88	69	86	70	87	74	89	71	86	76	86	76	89	79	91	71	83	73	80	72	83	70	88	73
26...	88	73	85	73	92	72	92	74	87	74	87	74	85	74	87	74	91	78	93	72	90	74	86	74	85	72	87	74
27...	86	71	88	74	91	70	90	73	87	75	90	72	85	74	87	70	89	78	92	73	88	72	91	74	84	72	89	72
28...	85	70	85	72	90	70	92	75	89	74	83	73	80	72	89	74	88	78	91	74	87	74	89	79	82	71	90	74
29...	87	68	85	70	90	67	90	76	85	75	88	71	82	72	85	76	92	80	85	74	90	74	89	75	86	70	90	74
30...	93	70	92	72	86	71	90	76	87	74	96	72	90	74	87	78	88	81	85	75	91	75	87	78	89	71	90	76
31...	86	71	92	71	92	70	90	76	89	75	90	74	89	77	86	75	88	72	89	76	89	76	82	76	82	72	91	75
Mns	89.2	70.3	91.1	71.3	89.8	69.5	90.1	72.6[1]	86.3	72.8	88.9	72.0	87.8	73.2	87.1	74.3	88.9	77.3	90.8	73.7	88.6	73.0	86.8	75.5	87.5	71.6	88.1	73.6

Date.	Alabama.																Mississippi.							
	Anniston.		Bermuda.		Birmingham.		Eufaula.‡‡		Mobile.		Montgomery.		Tuscaloosa.‡‡		Uniontown.		Columbus.‡‡		Hattiesburg.‡‡		Jackson.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	90	61	92	71	87	67	91	70	92	74	90	73	88	66	90	70	88	65	92	73	91	70	88	68
2.....	91	66	90	67	92	67	88	71	94	74	92	71	93	64	94	67	92	61	92	68	91	66	91	63
3.....	91	70	93	71	90	74	89	72	96	78	90	74	96	66	94	70	96	65	97	67	95	66	92	71
4.....	89	70	92	72	88	73	87	73	87	77	91	74	96	74	91	74	95	73	96	68	91	71	92	68
5.....	87	69	90	72	86	71	91	72	86	75	91	74	92	72	92	72	95	73	96	69	94	70	89	70
6.....	86	71	90	72	82	71	88	71	89	74	90	74	87	72	90	74	93	73	97	70	92	71	86	72
7.....	84	72	92	71	85	72	90	71	89	72	89	73	90	73	90	74	90	73	96	72	92	73	89	73
8.....	86	67	95	71	87	71	92	72	92	76	92	74	93	73	94	74	90	70	98	73	96	74	94	74
9.....	90	62	92	69	90	66	92	66	94	76	92	71	95	68	95	68	96	69	99	.....	96	73	93	70
10.....	86	67	94	71	86	69	91	67	94	73	92	72	88	68	90	70	91	70	93	.....	90	70	88	70
11.....	87	65	95	70	88	70	92	67	94	73	91	72	88	70	93	71	93	70	90	.....	90	74	89	71
12.....	85	66	85	70	85	67	79	67	87	72	84	68	88	70	86	72	90	69	93	.....	92	72	86	71
13.....	85	66	89	67	86	70	85	65	90	72	87	69	90	68	90	67	92	68	94	.....	93	71	87	69
14.....	85	66	91	67	86	68	87	66	93	73	87	69	91	68	92	67	92	67	96	.....	93	69	89	69
15.....	89	64	94	67	88	69	90	65	92	75	90	68	93	68	95	69	95	67	95	.....	92	75	91	69
16.....	90	64	96	67	90	69	92	65	92	74	93	71	94	68	97	69	97	69	97	.....	95	70	92	70
17.....	91	67	97	68	92	70	91	67	92	75	94	72	99	70	95	72	98	69	98	.....	97	70	93	70
18.....	91	68	94	68	90	71	89	68	90	75	93	72	96	70	.....	.....	98	69	96	.....	95	72	90	70
19.....	91	70	95	68	92	72	93	69	89	75	92	73	95	73	94	69	97	71	98	.....	96	70	92	71
20.....	88	70	.....	.....	90	69	90	70	90	75	89	74	93	72	92	74	94	71	97	.....	95	73	86	72
21.....	88	69	93	69	90	70	89	69	90	74	90	71	91	72	90	68	94	72	96	.....	94	70	90	71
22.....	86	64	93	69	87	71	88	66	93	75	88	70	91	71	90	68	96	69	96	.....	96	72	89	71
23.....	86	63	90	66	86	70	87	66	92	74	88	68	91	69	90	68	92	69	95	.....	95	73	88	70
24.....	84	69	84	68	84	69	87	67	88	74	86	69	90	69	90	68	92	66	94	.....	92	70	86	68
25.....	86	72	84	70	87	73	84	69	81	74	87	70	90	70	84	68	90	69	86	.....	89	70	83	72
26.....	89	69	92	70	89	71	91	70	85	74	90	72	91	70	90	70	93	68	92	.....	91	72	87	68
27.....	87	67	95	69	92	68	92	67	94	73	92	71	94	68	92	70	95	65	97	.....	93	68	90	68
28.....	90	70	94	70	92	72	91	67	94	77	90	73	95	68	93	72	97	67	96	.....	97	71	92	71
29.....	90	68	94	66	91	72	89	64	94	75	90	71	93	68	92	71	96	67	95	.....	96	69	91	68
30.....	84	70	92	67	88	70	88	66	93	74	87	70	93	69	91	71	94	67	94	.....	97	68	91	69
31.....	92	70	92	70	89	72	87	71	89	77	93	70	90	70	94	70	98	69	97	.....	99	69	92	71
Means.....	87.9	67.5	92.0[a]	69.1[a]	88.2	70.1	89.0	68.3	90.8	74.5	90.0	71.4	92.1	69.6	91.7[a]	70.2[a]	93.8	68.7	95.1	.....	93.7	70.7	89.5	69.9

Climatological Data for August, 1910.

DISTRICT No. 3, OHIO VALLEY.

FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

The weather during the month of August, 1910, was generally cool over the entire Ohio Valley district. There were only 2 warm periods of any consequence and they were of comparatively brief duration. There were no excessively high temperatures, the maxima being under 100° at all stations except 1 or 2. The most important feature of the month was the cool wave which occurred on the 26th and 27th, when minimum temperatures ranging between 35° and 50° were registered over most of the northern and central portions of the district, and light frosts formed at a few places in Pennsylvania, West Virginia, and Ohio. During this period new records for low temperature for August were made at some stations in Illinois and Ohio. Showers were quite frequent during the month, especially over the eastern portion south of Pennsylvania and in Tennessee, but the amount of precipitation was small, except in the extreme southeastern portion. Over most of the northern and eastern portions of the district the deficiency was very marked. Droughty conditions that had prevailed since about the middle of June continued throughout the month of August in Ohio, where at many stations there was less than 1 inch of rain during the month. In consequence of the prolongation of the dry weather vegetation suffered more in that State from the lack of moisture than in any other portion of the district. While the precipitation in southern Indiana and western Kentucky during August was decidedly deficient, the surplus of moisture from the heavy rains over those sections in July prevented much injury on account of the lack of rain in August. Also, light showers occurring at frequent intervals over most of the western portion of the district, including all of Tennessee, averted to a considerable degree the damage which would otherwise have resulted from the deficiency in the total amount of moisture received.

In the western portion of North Carolina very heavy rains the last 2 days of the month raised the total for the month to excessive amounts.

Very few general storms passed over the district during the month, the conditions being mostly dominated by high pressure areas of varying strength. Local thunderstorms were unusually few for the month of August, and damage of any consequence resulted from only 1 or 2. There were a few reports of destruction to property, and death from lightning.

The water in streams, reservoirs, and wells was abnormally low, and by the end of the month stock water had become scarce in portions of Pennsylvania, West Virginia, and Ohio, and in some instances streams that had never been known to be dry before were completely dried up.

TEMPERATURE.

The temperature during the month, although averaging slightly below normal at most stations in the district, was, on the whole, seasonable. The greatest deficiency occurred in central Kentucky, where the average for the month ranged from 2° to 5° below normal. There was a slight excess in the extreme northeastern portion and at a few stations in the southeastern portion of the district. There were no unusual extremes of heat for the season and no damaging cool weather. Except at 1 or 2 stations in Kentucky and in Alabama temperatures as high as 100° were not registered. In southwestern Virginia the highest temperature during the month was 88°. The weather was generally cool during the first 2 weeks of the month, the average daily temperatures ranging from 1° to 10° below normal, except that on the 3d and 4th it was somewhat above normal in the southern and extreme eastern sections. From the 14th to 18th a decided warm wave overspread the district, during which the highest temperatures for the month were generally registered. A decided cool wave prevailed in the period 26–28th, when minimum temperatures of 35° to 45° were registered in New York, Pennsylvania, West Virginia, and States north of the Ohio River; between 45° and 55° in Kentucky and southwestern Virginia, and 55° to 60° in Tennessee. During this period some of the lowest temperatures that have been recorded in 20 years in August were registered at many of the stations in Illinois, while in Ohio a new August record was made at a number of stations. Light frosts were reported at a few stations in Pennsylvania, West Virginia, and Ohio on the 27th and 28th, but they were not heavy enough to do any damage. There was a decided change to warm weather during the last 2 days.

PRECIPITATION.

Except in the southeastern portion of the district, over small areas in central Kentucky, and at a few scattered stations in other portions of the district the precipitation was light and quite deficient. Over the northern half and the greater part of the southwestern portion of the district the deficiency was so marked as to cause decidedly droughty conditions. That the drought did not become serious was owing largely to the fact that timely, although light, showers occurred at quite frequent intervals. While general rains were mostly confined to 4 periods viz, 4th, 7–10th, 18–26th (except in northeastern portion), and 31st, light local rains were scattered throughout the month in much of the district. In North Carolina and West Virginia rain of more or less amount occurred at one place or another practically every day. In Pennsylvania there was only about one-half of the usual August rainfall; in West Virginia it was mostly less than 2 inches, and the smallest rainfall for August, except in 1903, that has occurred in several decades; in Ohio at a number of stations the rainfall was less than 1 inch, while at 1 station it was only 0.1 inch. The section director of Ohio reports as follows:

The lack of moisture in August was severely felt in many of the middle and southwestern counties because the rainfall had also been light in those districts in July. At Columbus the total fall from July 6 to August 31 was only 0.83 inch, the longest dry period for that time of year at this station. Only once in 33 years has the total for the 2 months of July and August been lower than it was this year. In 1903 it was 2.72 inches and this year it was 2.82 inches. At the following stations the record for the 2 months of July and August was broken this year:

Rainfall for July and August, 1910.

	Record.	Amount.
	Years.	*Inches.*
Delaware	15	3.18
Greenville	25	2.60
Milfordton	18	2.43
Wooster	30	2.07

Reports of the serious effect of the drought upon pastures and the late crops have been received from all parts of the district. In some middle and northern counties it is said there will not be half a crop of corn. Fruit was reported to be dropping badly in some counties. Stock water became very scarce during the last of the month and streams that had never been known to be dry before were completely dried up.

At a number of stations in Indiana also the rainfall was less than 1 inch, the largest amount at any station in Indiana in the Ohio Basin being 3.5 inches.

The section director at Indianapolis states:

The precipitation, while generally deficient, was heaviest in the northern portion of the State and decreased quite uniformly toward the south, a fortunate distribution, as the heavy rains over the southern portion during

the previous month had accumulated sufficient moisture there to maintain a normal growth of vegetation, while the frequent and heavy rains which fell over the northern portion were sufficient to effectually break the drought obtaining during the greater part of June and throughout the month of July. This drought, however, seriously affected late crops, especially corn and potatoes. It is probable that, although some fields may yield fairly well, the average of the whole crop will not exceed one-half of that grown under normal conditions.

In Illinois the rainfall of the month ranged from 1.5 inch to 3.5 inches, and while below normal, was sufficient for passing needs. Droughty conditions prevailed in western Kentucky, where there was generally less than 1 inch of rain, but over the rest of the State, except in several counties in the north-central part, the rainfall was normal, and at quite a few stations in the central portion the amounts ranged from 1 to 3 inches in excess.

In Tennessee and northern Alabama the rainfall was generally deficient, not more than 50 to 60 per cent of the usual amount for August being received. The amounts at the various stations ranged mostly between 0.9 inch and 3.5 inches. At a few stations, however, there were excessive amounts, due to 1 or 2 locally heavy thundershowers. At Dickson, Tenn., on the 22d 5.64 inches of rain fell between 5 and 10 a. m., and at Dunlap, Tenn., on the 31st, 4.15 inches fell within 6 hours. In western North Carolina and the extreme northeastern part of Tennessee the monthly rainfall was excessive, due, for the most part, to heavy thundershowers on the 30th and 31st. The rainfall at several stations in North Carolina amounted to between 9 and 12.2 inches. Relative to heavy rains of the 30th–31st in North Carolina the section director remarks as follows:

The rainfall of August 30–31 in Transylvania, Henderson, Buncombe, and Haywood counties is the heaviest on record for the period of time in that section, the amounts ranging from 4 to 8 inches in about 28 hours. At Asheville rain began at 8 a. m. August 30, and ended at noon of the 31st; amount, 6.04 inches. The French Broad and its tributaries rose very rapidly, reaching a stage higher than any authentic record. This stream at Asheville rose from −0.3 foot at 8 a. m., August 30, to 10.5 feet at 6:30 p. m. The flood stage is 4 feet. The highest official record prior to the recent flood was 7.8 feet on January 23, 1906. There were several washouts on the railroads and a number of bridges and dams washed away. It is estimated that the total loss of property, exclusive of crops, will exceed $250,000.

MISCELLANEOUS.

August 7.—An observer describes a storm which occurred on the slope of the Great Smoky Mountains at the headwaters of the Hiwassee River, in extreme southeastern Tennessee, about 5 p. m., as follows:

Those who watched the gathering of this storm will never forget the picture. About 1 hour before the storm broke two great wing-shaped clouds, one moving northward and the other westward, appeared over the mountain crest. As they advanced these clouds would first approach and then slowly recede from each other, but each time closing in nearer, until finally, when they met there broke forth a deluge of rain and terrific thunder and lightning. The first overshadowing of the Great Smoky Mountains in the distance caused them to shade to deepest green. Then came a shade of wonderful beauty, a blending of purple and scarlet; then a perfect changing of color to that of an evening twilight of sky blue, deepening until the Great Smokies were a solid range of indigo, shading away into a blackness of pitch. Following this for 1 solid hour there appeared no mountains, so dense was the blackness. Those who have lived here among the mountains for more than 70 years say that it was one of those rare mountain storms probably witnessed not more than once in a lifetime. The deluge of storm water poured down the steep mountain sides in torrents. Great trees of pine, hemlock, and oak were uprooted, and carried down the foaming gulches, with logs, boulders, and dirt, as though they had been but drifting brushwood and trash.

August 9.—Two deaths by lightning occurred in Tennessee—1 in Rutherford, and the other in Wayne County. Also 2 young girls were badly shocked and burned near Wadeville, Tenn., as the result of a stroke of lightning.

August 10.—In Ohio lightning killed a man near Canal Fulton, and destroyed a club house at Myers' Lake.

August 12.—Lightning struck a barn near Lewisburg, W. Va., destroying it with its contents, besides killing several head of stock.

August 18.—Two men were seriously injured by lightning which struck a railroad depot at Milner, Ky.

August 21.—Lightning struck 1 of the stables at Churchill Downs, Louisville, Ky., injuring several thoroughbred race horses, 2 of them fatally. A number of other places in Louisville and vicinity were struck by lightning, resulting in minor damage to property. Two mules and a valuable horse were killed by lightning at Lebanon, Ky. Also hail and heavy rain occasioned some damage in Jefferson and near-by counties, and in the Bluegrass region of Kentucky.

On the same date, during an electric storm occurring about noon, 3 men were instantly killed and several others seriously injured by a stroke of lightning, which struck the steeple of Baldwin Chapel, Madison County, N. C. The church was badly damaged, and the congregation was thrown into a panic by the tragedy.

August 23.—A storm of considerable violence traversed the eastern border of Illinois, which being attended by high winds, caused much damage to the corn crop, many fields of corn being completely prostrated. There was also a great deal of damage to electric wires, shade and fruit trees, and small outbuildings. The cooperative observer at Danville, Ill., describes the storm at that place as follows:

I was awakened about 5:45 a. m. by the noise produced by high winds and observed a violent storm approaching from the north, which was attended by frightful-looking and rapidly-moving low-hanging clouds and thunder and lightning. The winds increased in force and at 6 a. m. were terrific. Rain began falling at 6:08 a. m., and ended at 8:38 a. m. With the storm came very cold blasts of wind and rain, the temperature falling decidedly within a few minutes.

Lightning destroyed both the house and barn of a farmer living near Crawfordsville, Ind. All the members of the family were badly stunned, but none fatally injured.

OHIO RIVER IMPROVEMENT.

The largest and most important survey party in the history of the Ohio River improvement work left Louisville, Ky., on August 8 for several months' field duty. The party, which is under the direct supervision of F. I. Loucks, Junior Engineer, was divided into 2 squads of 60 men each, 1 squad to begin work at Louisville, and the other at Catlettsburg, Ky., taking up the work where it was stopped last year.

This survey is in charge of Capt. Lytle Brown, United States Engineer Corps, stationed at Louisville, Ky. Captain Brown, in speaking of the nature of the work to be done, said:

The appropriation for this party was made by Congress last year, and includes $150,000 for actual survey and locating work. The object of this year's party is to definitely locate 14 locks and dams, which are the last of the 54 embodied in the Ohio River bill. This work will permit an exact and final estimate of cost, and detailed plans and specifications of all remaining locks and dams projected for the Ohio River. All except these last 14 have been located and permanent maps made of them.

This work has been watched with a great deal of interest by those favoring the improvement of the country's waterways, and it is believed that the addition of the 54 locks and dams will greatly enhance the value of the river as a means of transportation. Dam No. 37, below Cincinnati, is nearing completion and will soon be in working order.

WATER RESOURCES AND DRAINAGE.

Marion, Ohio, an inland city of 20,000, obtains its water supply from a system of wells located about 2 miles west of the city, on what are known as the "Plains." These plains extend northerly nearly to the lake. The supply is obtained from 10 6-inch wells averaging 104 feet deep, drilled into the gravel, which underlies all that section. The pumps are connected directly to the wells and the water sent through the entire city water supply system, the average 24-hour consumption being a little over 1,000,000 gallons. The height of the water in the wells is always about the same, regardless of the rainfall. The

wells are situated only a short distance from the Little Scioto River, which is frequently nearly dry during the summer months, but does not seem to have any effect on the wells. The water is very clear and hard, containing much lime.—*E. H. Raffensperger, D. D. S., Cooperative Observer, Marion, Ohio.*

In connection with the drainage work now under construction in Portage County I beg to state that the ditches are small and the swamp areas not large. The Stark-Portage ditch is a deepening of the upper end of the Little Cuyahoga River from Congress Lake in Stark County to near Randolph Center in Portage County. The main ditch is done and the laterals partly so. It will reclaim about 1,600 acres of good muck land fit for celery and onions.

The Black Brook ditch, now under construction, in the northern part of Mantau Township, is 2½ miles long and will drain 1,000 acres of muck land. Tinker Creek ditch, also under construction, is in Streetsboro Township, Portage County, and Hudson Township, Summit County, and will drain 500 acres. Hudson ditch in Roostown Township is 2½ miles long and will drain 350 acres. It has been surveyed and sold, but the ditching has not been begun. Portage-Trumbull ditch is under survey.—*J. B. Shewell, County Surveyor, Ravenna, Ohio.*

Champaign County is undergoing many changes in its once beautiful streams. Mad River, with its once shady banks and clear pools of fishing water, is being dredged out to make adjacent country fields more productive for corn. It had a length of 16 miles or more with a fall averaging 8 feet. Now we have a ditch 20 to 30 feet wide on the bottom, with banks sloping 1 horizontal to 1 vertical, and a levee on each side with a berm of 10 feet. All timber will be removed for 100 feet on each side of the center line of improvement.

Leatherwood Creek, a beautiful stream in the western part of the county, has been laid out and sold. Mosquito Creek, the outlet to Mosquito Lake, once the home of the big mouthed bass, will be dredged to the Miami River in Shelby County, a distance of 10 miles. There are 20 other ditches, mostly tile, from 6 to 30 inches in size, now under way in this county.—*James Swisher, County Surveyor, Urbana, Ohio.*

TABLE 1.—*Climatological data for August, 1910. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	4	66.1	.....	90	15	39	27	39	3.33	.....	1.23	0.0	9	7	10	14	nw.	Charles E. Whitney.
Bolivar	Allegheny	1,800	16	65.8	+ 0.8	91	15†	37	1†	42	3.50	− 0.35	1.25	0.0	7	15	4	12	w.	Lowell Andrus.
Franklinville	Cattaraugus	1,598	13	65.1	− 0.5	87	15	39	26	38	4.55	+ 0.90	1.64	0.0	9	14	6	11	s.	Dr. John W. Kales.
Olean	....do	.....	2	.....	.....	.....	.....	.....	.....	.....	2.62	.....	1.00	0.0	8	.....	.....	.....	.....	John W. Alles.
Pennsylvania.																				
Aleppo	Greene	1,135	9	70.0	.....	91	3†	39	27	41	1.12	.....	0.52	0.0	5	22	5	4	sw.	J. S. Hinerman.
Baldwin	Butler	1,404	4	68.8	.....	88	3†	40	27	37	2.93	.....	1.56	0.0	5	16	13	2	w.	S. H. Templeton.
Claysville	Washington	1,127	6	72.1	.....	95	3†	39	27	42	2.17	.....	1.09	0.0	7	20	8	3	w.	E. T. Buchanan.
Franklin	Venango	955	36	68.4	− 0.3	90	15†	41	27	43	1.50	− 2.15	0.90	0.0	5	15	8	8	nw.	F. E. Dixon.
Greenville	Mercer	950	14	67.6	+ 0.4	93	14†	35	9	52	1.45	− 2.11	0.69	0.0	5	24[a]	2[a]	4[a]	n.	A. M. Orr.
Indiana	Indiana	1,350	13	71.2	+ 1.9	94	16	42	27	41	2.99	.....	1.13	0.0	5	17	10	4	s.	Rev. J. M. Welch.
Johnstown	Cambria	1,184	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Lorentz.
Lycippus	Westmoreland	1,420	18	71.6	+ 0.6	89	3†	50	27†	32	2.49	− 1.54	0.73	0.0	7	.....	.....	.....	.....	Murray Forbes.
Pittsburg	Allegheny	842	40	72.8	0.0	90	14	49	27	27	2.47	− 0.60	0.92	0.0	8	15	13	3	sw.	U. S. Weather Bureau.
Saegerstown	Crawford	1,116	19	67.2	+ 0.1	90	15	37	27	46	1.83	− 2.36	0.80	0.0	7	5	17	9	nw.	J. G. Apple.
Skidmore	Lawrence	1,000	6	68.4	.....	94	15	36	27	43	0.55	.....	0.35	0.0	2	29	1	1	s.	W. H. Stoner.
Somerset	Somerset	2,250	54	69.6	+ 2.7	94	3	35	27	47	2.40	− 2.32	0.90	0.0	4	14	4	3	se.	W. M. Schrock.
Uniontown	Fayette	999	22	71.2	− 0.4	90	3†	44	27	29	2.24	− 2.14	0.90	0.0	5	20	7	4	se.	Wm. Hunt.
Warren	Warren	1,137	21	67.4	+ 0.2	87	25	42	28	36	2.90	− 1.03	1.40	0.0	5	19	0	12	sw.	Anna Simpson.
Maryland.																				
Deer Park	Garrett	.....	16	67.0	+ 1.7	94	20	34	27	54	2.61	− 0.86	0.61	0.0	6	.....	.....	.....	.....	S. P. Specht.
Grantville	....do	.....	16	65.2	− 1.4	86	3	38	27	37	1.89	− 1.97	0.83	0.0	5	.....	.....	.....	.....	J. S. Miller.
Oakland	....do	.....	10	65.4	+ 0.3	90	3	36	27	43	2.36	− 1.19	0.75	0.0	7	20	8	3	e.	R. E. Weber.
West Virginia.																				
Bancroft	Putnam	.....	6	73.0	.....	92	29	50	27	39	1.32	.....	0.98	0.0	6	19	7	5	sw.	James Hill.
Beckley	Raleigh	2,440	11	67.8	.....	90	3	48	7†	37	3.79	.....	1.01	0.0	7	21	4	6	w.	John A. Ewart.
Ben's Run	Pleasants	622	9	73.8	.....	95	17†	47	27	38	2.04	− 1.76	1.11	0.0	6	28	3	0	.....	J. D. Riggs.
Bluefield	Mercer	2,563	15	69.6	− 1.9	85	12†	52	9†	30	2.59	− 2.32	0.50	0.0	16	12	2	17	.....	Norfolk & Western Ry.
Buckhannon	Upshur	1,472	20	68.8	− 1.7	91	3	45	27	37	1.97	− 1.56	0.88	0.0	5	27	2	2	.....	H. A. Darnall.
Cairo	Ritchie	667	8	71.3	.....	95	18	44	26	43	2.53	.....	1.20	0.0	6	0	23	8	s.	Van A. Zevely.
Central Station	Doddridge	900	11	69.0	− 2.8	94	18	39	27	42	2.95	− 0.02	0.80	0.0	7	13	13	5	sw.	G. W. Sherwood.
Charleston	Kanawha	598	24	74.4	.....	92	17	53	27	31	0.78	− 3.48	0.37	0.0	4	21	9	1	w.	R. C. Hewes.
Creston	Wirt	612	10	73.8	.....	98	29	44	27	45	1.42	− 1.44	0.92	0.0	4	22	4	5	w.	J. M. Reed.
Cuba	Jackson	544	9	70.8	.....	92	17†	39	27	40	1.97	− 0.84	0.84	0.0	6	16	14	1	w.	C. T. Perry.
Elkhorn	McDowell	1,933	18	69.8	− 1.5	88	18	51	27	31	2.29	− 1.33	0.47	0.0	12	14	15	2	sw.	J. J. Lincoln.
Elkins	Randolph	1,940	11	68.0	− 0.4	90	3	47	27	37	2.70	− 0.95	1.57	0.0	9	10	13	8	s.	U. S. Weather Bureau.
Fairmont	Marion	.....	18	73.7[d]	.....	96	3	47	26	42[d]	2.83	− 0.50	0.60	0.0	7	.....	.....	.....	.....	H. Glenn Fleming.
Glennville	Gilmer	738	22	73.4	+ 0.4	97	17	47	27	41	1.03	− 2.73	0.45	0.0	4	11	7	13	sw.	John Holt.
Grafton	Taylor	985	18	70.3	− 1.0	94	18	45	27	40	2.01	− 1.63	0.95	0.0	6	21	10	0	.....	John W. Snider.
Green Sulphur Springs	Summers	1,600	14	70.2	− 1.6	92	1	49	7	35	2.90	− 0.09	0.76	0.0	10	25	0	6	w.	John W. Dalton.
Hinton	....do	1,400	21	71.9[b]	− 2.4	92	18	56	21	31[b]	2.38	− 1.36	0.64	0.0	12	19	6	6	w.	J. B. Lavender, C. E.
Huntingdon	Cabell	510	15	73.4	− 1.3	93	3	49	27	37	2.12	− 1.55	0.90	0.0	5	22	0	9	w.	L. H. Hutchinson.
Lewisburg	Greenbrier	2,200	10	67.8	− 2.7	87	3	48	7	31	3.77	+ 0.27	1.71	0.0	14	20	9	2	nw.	Geo. T. Atgabrite.
Logan	Logan	665	8	74.6	.....	94	3†	53	1	36	2.23	.....	0.82	.....	6	5	26	0	e.	H. C. Ragland.
Lost Creek	Harrison	1,033	14	70.2	− 0.6	94	17†	43	27	43	4.07	+ 0.17	1.68	0.0	6	22	5	4	w.	Allen Smith.
Madison	Boone	704	5	73.4	.....	94	17	52	13	36	0.70	.....	0.25	0.0	7	25	6	0	.....	S. E. Bradley.
Mannington	Marion	967	7	70.3	.....	94	3	40	27	44	2.07	.....	0.88	0.0	8	23	6	2	w.	Jas. A. Morgan.
Marlinton	Pocahontas	2,169	11	64.8	− 3.8	80	3	48	7	27	5.58	+ 1.21	1.25	0.0	8	14	14	3	.....	C. J. McCarty.
Morgantown	Monongalia	1,250	36	71.6	− 0.7	91	3	48	27	33	2.32	− 1.81	0.85	0.0	6	21	8	2	s.	Horace Atwood.
Moundsville	Marshall	640	8	73.1	.....	95	3	45	27	40	1.99	.....	0.93	0.0	5	21	3	7	sw.	J. E. Matthews.
New Cumberland	Hancock	987	10	71.0	+ 0.3	92	3†	39	27	44	1.70	− 1.76	0.75	0.0	4	15	14	2	s.	Frank S. Evans.
New Martinsville	Wetzel	634	17	74.3	+ 0.2	96	3†	48	20	39	1.09	− 1.62	0.54	0.0	3	26	4	1	s.	Wm. Ankron.
Nuttallburg	Fayette	2,252	18	67.0	− 3.9	86	16†	50	7†	32	2.61	− 0.61	0.65	0.0	9	13	14	4	.....	Stephen Tully.
Parkersburg	Wood	638	22	73.5	0.0	93	3	51	27	32	1.19	− 2.34	0.48	0.0	6	14	14	3	se.	U. S. Weather Bureau.
Parsons	Tucker	1,662	11	68.1	− 1.4	93	18	44	20	42	0.92	− 2.27	0.25	0.0	5	19	12	0	.....	J. W. Swisher.
Philippi	Barbour	1,192	18	70.4	− 1.4	93	18	45	1†	44	2.14	− 1.47	0.87	0.0	9	11	15	5	w.	J. D. Dadisman.
Pickens	Randolph	2,785	20	65.4	− 1.7	84	18	48	20†	29	3.67	− 1.10	1.05	0.0	10	25	3	3	w.	Dr. J. L. Cunningham.
Pineville	Wyoming	.....	2	72.2	.....	92	17	53	7	32	.....	.....	.....	.....	..	16	3	7	.....	W. V. Senter.
Point Pleasant	Mason	553	21	74.6	− 0.3	96	3†	45	27	40	0.88	− 2.44	0.48	0.0	5	14	6	11	nw.	W. D. Holmes.
Powellton	Fayette	904	14	69.6	− 3.2	92	3	50	8†	37	1.96	− 2.02	.....	.....	.....	.....	.....	.....	.....	Dr. A. W. DeBell.
Princeton	Mercer	2,469	10	64.2	.....	79	18	49	29	25	1.50	− 3.56	0.70	0.0	8	7	21	3	e.	H. Scott.
Robertsburg	Putnam	.....	1	72.5	.....	95	16	45	27	40	0.99	.....	0.45	0.0	5	22	0	9	.....	E. P. Turley.
Ryan	Roane	639	7	70.2	.....	92	29	42	27	44	1.96	.....	1.07	0.0	6	18	7	6	.....	Wm. E. Ryan.
Smithfield	Wetzel	.....	6	68.9	.....	88	18	44	27	33	1.22	.....	0.56	0.0	6	20	8	3	se.	G. M. Whisler.
Spencer	Roane	710	7	69.2	.....	93	18	40	27	44	0.70	− 2.29	0.65	0.0	2	0	31	0	.....	A. M. McKown.
Sutton	Braxton	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Baughman.
Terra Alta	Preston	3,207	10	69.8	+ 2.1	88	3	55	9	25	1.59	− 2.61	0.59	0.0	6	22	4	5	sw.	C. F. Dodge.
Union	Monroe	.....	7	68.0	.....	91	3	48	7	35	2.02	.....	0.63	0.0	7	.....	.....	.....	.....	Shelton Clark.
Valley Fork	Clay	.....	7	.....	.....	.....	.....	.....	.....	.....	2.06	.....	0.86	0.0	5	13	18	0	.....	Miss Blanche Pierson.
Webster Springs	Webster	1,500	7	70.8	.....	91	3	49	21	35	2.87	.....	0.55	0.0	8	8	20	3	s.	D. H. Hamrick.
Wellsburg	Brooke	1,225	10	70.6	+ 0.5	87	3	45	27	29	2.52	− 0.96	1.10	0.0	7	15	16	0	w.	C. P. Waugh.
Weston	Lewis	824	21	71.3	− 2.8	94	3†	48	20	44	1.93	− 1.92	0.54	0.0	9	16	12	3	sw.	Miss C. M. Davis.
Wheeling	Ohio	645	26	72.8	.....	96	17	47	27	42	1.65	− 1.86	0.80	0.0	4	21	8	2	sw.	Miss M. B. Forsyth.
Williamson	Mingo	660	10	74.8	− 0.6	91	17†	60	13†	27	1.78	− 1.74	0.50	0.0	8	15	12	4	e.	J. F. Keyser.
Ohio.																				
Amesville	Athens	630	6	72.4	.....	97	30	40	27	46	2.50	.....	0.78	0.0	6	22	9	0	nw.	F. W. Gibson.
Bangorville	Richland	1,380	23	72.4	+ 2.2	95	16	47	27	35	1.45	− 1.72	0.62	0.0	6	13	18	0	sw.	S. M. Painter.
Bellefontaine	Logan	1,276	16	70.4	− 1.2	93	15†	44	27	40	1.48	− 1.89	0.62	0.0	5	16	11	4	sw.	Cory L. Lane.
Bladensburg	Knox	1,100	19	69.2[d]	− 1.1	93	16	36	26	43[d]	0.53	− 2.00	0.43	0.0	3	10	21	0	sw.	Miss Mary Elliott.
Cadis	Harrison	1,245	7	72.4	.....	93	3†	46	27	34	2.33	.....	0.97	0.0	6	17	8	6	s.	Harry B. McConnell.
Cambridge	Guernsey	803	18	70.8	+ 0.1	93	3†	41	27	40	2.10	− 0.84	0.98	0.0	4	14	16	1	.....	Samuel Mehaffey.
Camp Dennison	Hamilton	570	17	72.4	− 2.5	97	17	46	27†	40	1.43	− 1.37	0.94	0.0	5	18	10	3	sw.	Henry F. Pinkvoss.
Canal Dover	Tuscarawas	884	17	70.2	− 0.4	92	3	40	27	38	2.11	− 0.85	0.62	0.0	6	13	17	1	nw.	Ed. S. Slingluff.
Canton	Stark	1,065	27	69.6	0.0	90	3	41	27	36	1.47	− 1.87	0.95	0.0	4	18	9	4	sw.	Prof. C. F. Stokey.
Cardington	Morrow	1,010	15	71.0	+ 1.0	96	15	41	27	42	1.13	− 1.44	0.63	0.0	5	20	6	5	sw.	Ansel E. Salisbury.
Chillicothe	Ross	630	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	0.09	0.0	2	.....	.....	.....	.....	Owen L. Brown.
Cincinnati	Hamilton	628	39	74.6	− 0.9	93	17	54	27	29	1.26	− 2.07	0.81	0.0	4	16	13	2	se.	U. S. Weather Bureau.
Circleville	Pickaway	694	22	74.0	+ 0.7	96	15†	47	27	39	1.33	− 1.81	1.03	0.0	3	24	5	2	sw.	Hon. S. W. Courtright
Clarington	Monroe	600	7	71.8	.....	94	17†	45	20†	40	1.37	.....	0.82	0.0	5	18	7	6	sw.	Col. S. Tschappat.
Columbus	Franklin	918	32	73.4	+ 0.4	94	15	51	27	32	0.42	− 2.80	0.31	0.0	7	19	8	4	s.	U. S. Weather Bureau.
Coshocton	Coshocton	770	1	.....	.....	.....	.....	.....	.....	.....	2.08	.....	1.40	0.0	4	.....	.....	.....	.....	Mrs. Ada Jeffries.
Dayton	Montgomery	790	29	73.0	− 0.6	96	17†	40	28	49	0.47	− 2.61	0.35	0.0	3	23	6	2	sw.	Mrs. Edith L. Boyer.
Delaware	Delaware	927	13	71.8	+ 0.1	96	15	41	27	42	0.68	− 2.59	0.40	0.0	5	19	3	9	sw.	Prof. L. L. Hudson.
Demos	Belmont	1,325	22	72.7	+ 1.4	96	16	40	27	41	1.81	− 1.91	1.05	0.0	6	26	4	1	n.	J. T. Dysart.
Dennison§	Tuscarawas	906	.....	72.4	.....	97	14	40	27	45	2.27	.....	0.87	0.0	8	19	11	1	s.	Water Supply Co.
Frankfort	Ross	750	18	72.6	0.0	95	18	44	27	37	1.45	− 1.77	0.80	0.0	4	26	2	3	sw.	O. A. Cory.
Garrettsville	Portage	1,005	26	68.4	+ 1.4	94	15	36	27	43	0.97	− 2.51	0.52	0.0	4	19	10	2	sw.	S. M. Luther.

TABLE 1.—*Climatological data for August, 1910. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
Granville	Licking	980	28	71.8	+ 0.8	96	15	40	27	42	1.48	− 1.33	0.56	0.0	6	21	2	8	e.	Dr. L. E. Davis.
Gratiot‖	do	1,000	21	70.2	− 0.6	91	16	41	27	36	1.31	− 1.87	0.75	0.0	5	12	19	0	sw.	W. B. Longstreth.
Green	Adams	500	17	73.2	− 1.5	91	3†	42	28	46	2.15	− 1.29	1.00	0.0	4	23	8	0	w.	W. F. Kenyon.
Green Hill	Columbiana	1,135	18	67.8	− 0.9	92	15	36	27	41	1.35	− 1.95	0.87	0.0	6	18	13	0	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	24	71.6	+ 0.7	94	14†	46	27	36	0.54	− 2.77	0.43	0.0	4	23	6	2	s.	G. A. Katzenberger.
Hillsboro	Highland	1,063	31	71.0	− 3.4	89	12	47	27	31	3.15	− 0.10	1.68	0.0	5	6	22	3	sw.	Carey H. Roush.
Ironton	Lawrence	575	27	73.6	+ 0.3	93	3	51	27†	36	1.39	− 2.55	0.70	0.0	8	24	4	3	sw.	James Bull.
Jacksonburg	Butler	975	42	73.5	− 0.9	97	17	48	27	35	0.98	− 2.42	0.60	0.0	4	18	12	1	ne.	Dr. J. B. Owsley.
Kenton	Hardin	1,015	18	71.0	− 0.8	97	17	41	28	45	1.92	− 0.48	1.17	0.0	6	19	11	1	w.	N. S. Martin.
Killbuck	Holmes	1,087	18	70.5	− 0.5	93	15	42	27†	44	1.75	− 1.55	0.58	0.0	5	18	10	3	n.	Geo. W. Nowels.
Lancaster	Fairfield	898	15	71.6	− 0.1	91	16	45	27	33	1.69	− 1.19	1.00	0.0	6	26	3	2	sw.	R. L. Renshaw.
Lawshe	Adams	900	7	71.8		94	17†	42	27	42	1.55		0.78	0.0	8	23	3	5	w.	Miss Ruth Hoffman.
McConnelsville	Morgan	710	26	71.8	0.0	93	3	43	27	35	2.36	− 0.87	0.93	0.0	6	13	14	4	s.	C. H. Morris.
Marietta	Washington	627	90	74.0	+ 2.0	95	17	47	27	37	1.93	− 1.83	0.71	0.0	5	14	9	8	s.	Prof. T. D. Biscoe.
Marion	Marion	980	32	72.8	+ 0.9	98	15	42	27	45	1.31	− 1.64	0.65	0.0	5	12	13	6	nw.	Dr. E. H. Raffensperger.
Milfordton	Knox	1,200	18	70.7	+ 0.2	93	14†	40	27	40	0.27	− 2.57	0.18	0.0	3	26	5	0	sw.	L. H. Burgess.
Milligan‖	Perry	875	17	69.9	− 2.0	94	16	38	27	44	1.89	− 0.91	1.20	0.0	5	14	13	4	sw.	V. C. Eveland.
Millport	Columbiana	1,145	18	68.8	− 0.4	90	14†	38	27	38	2.44	− 0.80	1.08	0.0	5	14	17	0	w.	G. F. Copeland.
Nellie	Coshocton	850	10	69.6	− 2.0	94	15	42	27	44	0.98	− 2.87	0.75	0.0	4	17	13	1	s.	Miss Ethel L. Gamertsfelder
New Alexandria	Jefferson	1,050	25	71.2	+ 0.1	95	3	40	26	40	2.35	− 1.22	1.00	0.0	4	26	3	2	w.	Mrs. Mary K. Pennell.
New Berlin	Stark	1,100	18	69.9	− 1.1	95	15	40	27	39	1.63	− 1.82	0.70	0.0	4	28	1	2	nw.	Clayton Holl.
New Waterford	Columbiana	1,053	16	69.4	0.0	91	3†	38	27	42	2.26	− 1.43	0.96	0.0	3	24	5	2	sw.	Sam. C. Scott.
Ohio State University	Franklin	757	27	72.4	+ 1.3	96	15	43	27	43	0.36	− 2.57	0.28	0.0	3	15	13	3	sw.	Prof. H. C. Lord.
Pataskala	Licking	997	18	71.0	− 0.9	93	16	40	27	39	0.59	− 2.69	0.23	0.0	6	15	15	1	sw.	J. N. Ridenour.
Philo(1)	Muskingum	1,018	15	73.1	0.0	93	3†	45	27	39	1.07	− 1.69	0.65	0.0	3	17	13	1	nw.	L. C. Burckholter.
Piqua	Miami	847	2								0.61		0.44	0.0	3					Harry L. Roberts.
Plattsburg	Clarke	1,130	17	71.1	− 1.1	93	15	43	27	38	0.32	− 2.16	0.17	0.0	3	20	10	1	s.	F. E. Stewart.
Pomeroy	Meigs	781	26																	W. L. Russell.
Portsmouth	Scioto	527	79	72.4	− 1.9	91	18	53	20†	31	3.23	− 0.23	1.26	0.0	5	25	1	5	w.	Dr. H. A. Schirrmann.
Prospect	Marion	909									1.10		0.90	0.0	2					Neil J. Gast.
Rittman	Wayne	990	18	69.2	0.0	96	30	40	27	46	1.04	− 2.03	0.70	0.0	2	25	5	1	s.	J. B. Gish.
Shenandoah‖	Richland	1,100	18	68.8	− 1.1	93	15	41	27	45	1.17	− 1.95	0.90	0.0	3	12	19	0	sw.	T. B. Arnett.
Sidney	Shelby	985	27	73.4	+ 0.9	97	17	45	27	41	3.33	+ 0.50	2.80	0.0	4	21	6	4	s.	Hamline B. Blake.
Somerset	Perry	1,080	11	72.6	− 0.9	93	3†	47	27	34	1.89	− 1.28	1.03	0.0	5	22	8	1	s.	Miss M. W. C. Sheridan.
Springfield	Clarke	1,002	16								0.42	− 1.95	0.34	0.0	3	8	19	4	s.	W. A. Webster.
Summerfield	Noble	1,187	4	71.4		94	3†	39	27	43	2.04		0.93	0.0	6	14	16	1	sw.	H. R. McClintock.
Thurman	Gallia	696	17	72.7	− 2.2	93	30	45	27	39	1.74	− 1.13	1.00	0.0	2	13	13	5	w.	D. D. Thomas.
Urbana	Champaign	1,031	40	72.6	+ 1.3	98	17	42	27	42	1.16	− 2.12	0.92	0.0	3	15	12	4	sw.	Prof. J. H. Williams.
Warren	Trumbull	900	21	70.4	+ 0.6	94	14†	37	28	41	0.84	− 2.42	0.63	0.0	2	17	12	2	sw.	M. D. McCorkle.
Waverly‖	Pike	590	27	73.0	− 0.7	96	16	45	27	38	1.64	− 1.75	0.92	0.0	6	20	1	10	n.	Herrmann A. Lorbach.
Waynesville	Warren	700	25	71.2	− 1.8	90	17	49	27	30	0.61	− 3.22	0.47	0.0	3	21	9	1	w.	Charles Michener.
Wooster	Wayne	1,030	30	70.9	+ 2.0	94	15†	38	27	43	0.95	− 2.07	0.44	0.0	6	23	6	2	sw.	Experiment Station.
Youngstown	Mahoning	846	18								1.99		0.88	0.0						G. R. Patton.
Zanesville	Muskingum	700	23								1.60	− 1.28	0.70	0.0	6	24	1	6		S. G. Sprague.
Virginia.																				
Big Stone Gap	Wise	1,540	19	71.2	− 0.9	85	2†	56	14	25	4.87	− 0.16	1.45	0.0	10	14	13	4	w.	John W. Fox, sr.
Blacksburg	Montgomery	2,170	19	66.9	− 3.4	88	2†	48	11	36	2.32	− 1.77	1.02	0.0	11	5	8	18	w.	Agricultural Exp. Station.
Burksgarden	Tazewell	3,250	15	63.5	− 3.2	82	2†	45	9†	34	4.08	− 0.37	1.22	0.0	8	9	9	13	w.	C. H. Greever.
Elk Knob	Lee	3,243	7	73.0		85	2	57	27	24	4.00		0.85	0.0	13	16	7	8	ne.	Henry Nicoll.
Galax	Grayson	2,300	....	68.4[a]		87	15	51	9	30	4.81		1.80	0.0	8	15	7	9	s.	E. C. Williams.
Ivanhoe**‖	Wythe	2,028	6	68.6		82	3	52	11	24	2.28		0.54	0.0	14	9	21	1	w.	Miss Alice G. Jewett.
Lebanon	Russell	2,131	....	70.0		88	3	51	14	31	3.40		0.91	0.0	10	13	11	7	sw.	R. W. Swain.
Marion	Smyth	2,224	15	68.4	− 2.7	88	2	50	12†	34	4.53	− 0.16	1.10	0.0	12	18	13	0	sw.	S. W'n State Hospital.
Max Meadows	Wythe	2,028	14																	James M. Graham.
Mendota‖‖	Washington	1,350	1								3.14		1.22	0.0	8					Frank M. Baker.
Radford‖‖	Montgomery	1,773	1								3.80		0.88	0.0	10					Arthur Roberts.
Speers Ferry‖‖	Scott	1,221	14								4.54	− 0.59	0.90	0.0	9					Mrs. L. E. Venable.
Wytheville	Wythe	2,293	17	68.8	− 1.7	88	2	54	9	30	3.70	− 0.84	1.13	0.0	11	8	20	3	e.	U. S. Weather Bureau.
North Carolina.																				
Altapass	Mitchell	2,629	....																	C. C. & O. Railway.
Andrews	Cherokee	1,800	....	73.6		91	16†	54	11	36	4.23		1.48	0.0	17	9	20	2	sw.	J. D. Link.
Asheville	Buncombe	2,250	31	70.6	+ 0.1	85	18	54	13	26	9.12	+ 4.42	5.76	0.0	17	9	13	9	se.	U. S. Weather Bureau.
Banners Elk	Watauga	3,750	2	65.0		80	17	45	9	33	8.87		1.80	0.0	14	13	8	10	w.	T. L. Lowe.
Brevard	Transylvania	2,230	9	72.6		87	1†	52	10	35	12.23		5.70	0.0	13	9	19	3	s.	W. E. Breese.
Bryson City	Swain	2,000	22								3.37	− 1.90	0.82	0.0	12					D. K. Collins.
Cullowhee	Jackson	2,100	....	72.4		89	18	52	13	34	3.59		1.03	0.0	17	16	7	8	nw.	F. H. Brown.
Hendersonville	Henderson	2,167	14	71.1	− 1.4	86	3†	54	22	28	11.74	+ 3.83	3.90	0.0	15	15	10	6	w.	T. W. Valentine.
Highlands	Macon	3,670	20	64.4	− 1.4	79	5	48	13†	28	6.45	− 1.18	2.25	0.0	13	6	23	2	se.	T. G. Harbison.
Hot Springs	Madison	1,326	12	73.7	+ 0.6	89	2	58	14	27	4.96		1.32	0.0	9	14	15	2	e.	P. A. Garner.
Jefferson	Ashe	2,800	3	67.8		83	2	51	9†	29	6.96		1.63	0.0	14	8	2	21	s.	E. J. Johnson.
Marshall	Madison	1,646	9	73.2		89	17†	56	13†	32	4.75		1.70	0.0	13					W. E. Finley.
Murphy	Cherokee	1,614	34								6.25	+ 0.91	1.28	0.0	10					Miss J. Campbell.
Rock House	Macon	3,100	18	68.8	− 2.3	81	4	54	14	19	9.20	− 0.26	3.63	0.0	17	7	17	7	se.	B. C. Hawkins.
Waynesville	Haywood	2,756	16	69.9	− 0.3	87	18	51	14	33	6.74	+ 2.32	3.72	0.0	18	17	8	6	ne.	J. C. L. Gudger.
Georgia.																				
Diamond	Gilmer	2,020	20	72.6	− 0.6	87	1†	57	10†	27	3.98	− 3.12	1.24	0.0	11	14[a]	10[a]	6[a]		R. A. Kimzey.
La Fayette	Walker	841	4	76.3		94	2	59	1	31	3.86		1.44	0.0	9	12	8	11	w.	Ralph A. Snow.
Alabama.																				
Bridgeport	Jackson	660	10								3.00	− 1.31	0.90	0.0	8	10	3	18	e.	R. L. Moore.
Decatur	Morgan	573	28	79.6	+ 0.9	97	19	61	1†	33	1.55	− 1.81	0.78	0.0	6	14	4	13	e.	Ernest A. Carriger.
Florence	Lauderdale	563	26	79.2	+ 0.4	94	17	64	27	23	1.50	− 2.19	0.76	0.0	5	16	8	7	e.	Robt. E. Coburn.
Guntersville	Marshall	580	5	78.4		94	2†	60	1	30	2.10		0.68	0.0	6	17	3	11	n.	L. S. Long.
Madison	Madison	573	16	77.4	− 1.9	95	17†	60	1†	33	1.60	− 1.76	0.55	0.0	6	20	11	0	se.	Albert Klish.
Riverton	Colbert	360	13	77.8	− 0.7	102	19	54	2	37	0.78	− 2.83	0.40	0.0	4	14	10	7	e.	Ernie J. Moore.
Scottsboro	Jackson	652	27	76.3	− 1.3	92	17†	59	1	25	1.27	− 2.45	0.31	0.0	7	12	16	3		Miss Irene Caldwell.
Tuscumbia	Colbert	488	28	78.2	− 0.7	94	17	61	1†	29	2.41	− 1.06	1.76	0.0	6	10	4	17	se.	Samuel Moore.
Tennessee.																				
Ashwood	Maury	725	31	75.9	− 1.6	94	18	57	1†	32	1.40	− 2.46	0.60	0.0	5	5	12	14	s.	Mrs. J. W. Fleming.
Benton	Polk	880	25	76.2	+ 0.1	92	2†	59	1†	30	4.97	+ 0.82	2.50	0.0	7	12	19	0	s.	G. L. Williams.
Birds Bridge	Greene		4								4.47		1.38	0.0	7	17	1	13	e.	D. B. George.
Bluff City	Sullivan		13								4.60	+ 0.45	1.30	0.0	10	8	5	18		J. W. Fisher.
Byrdstown	Pickett	1,026	17	73.8[d]	− 1.5	91	17	55	1	29[d]	2.17	− 2.09	0.80	0.0	6	8	14	9	sw.	John Lacy.
Carthage	Smith	500	26	76.0	− 0.5	94	28†	52	2	36	1.39	− 2.85	1.25	0.0	3	17	5	9	se.	E. C. Pickering.
Cedar Hill	Robertson	625	10	76.8	− 1.8	97	17	54	27	32	2.80	− 0.49	1.00	0.0	7	20	9	2	s.	J. F. Ruffin.
Celina	Clay	494	7								2.52		0.84	0.0	6	18	3	10		S. B. Anderson.
Cenret Point	Chester		13								2.27		1.25	0.0	3	29	0	2	s.	H. H. Bailey.
Charleston	Bradley		13								3.40		1.03	0.0	9	19	1	11	s.	J. T. Weeks.

TABLE 1.—*Climatological data for August, 1910. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Tennessee—Cont'd.																			
Chattanooga	Hamilton	808	31	77.2	+ 0.7	92	17	63	9	25	1.09	− 2.66	0.42	0.0	12	11	11	9	ne.	U. S. Weather Bureau.
Clarksville	Montgomery	520	47	76.2	− 0.8	98	31	55	27	37	0.98	− 2.28	0.41	0.0	5	15	14	2	s.	Prof. Jas. A. Lyon.
Clinton	Anderson		22								3.13	− 1.25	0.95	0.0	7	17	0	14	sw.	John Thompson.
Dandridge	Jefferson		6								5.78		1.90	0.0	7	17	8	6	w.	J. E. Swann.
Decatur	Meigs	850	14	76.8	− 0.1	96	11	58	11†	38	3.48	− 1.67	0.80	0.0	10	17	13	1	sw.	J. W. Lillard.
Dickson	Dickson	800	14	74.2	− 3.0	93	18	56	27	29	7.32	+ 3.76	5.65	0.0	7	4	25	2	s.	N. R. Sugg.
Dover	Stewart		15	77.0	− 0.7	98	19	57	2†	34	1.16		0.86	0.0	2	18	10	3	s.	A. M. Tippit.
Dunlap	Seaquatchee	726	1	77.0		97	17	55	1	34	5.63		4.15	0.0	13	10	18	3		S. B. Boyd.
Elizabethton	Carter	1,575	20								3.34	− 1.10	1.07	0.0	7	18	6	7	e.	Chas. Boyd.
Erasmus	Cumberland	1,850	13	71.0	− 1.0	90	17†	49	11†	37	2.72	− 2.32	0.71	0.0	9	13	15	3	se.	Mrs. E. D. Ashley.
Florence	Rutherford	560	28	75.4	− 1.2	91	17†	59	1†	27	1.72	− 1.86	0.89	0.0	5	16	15	0	w.	Erastus P. Bell.
Franklin	Williamson	655	20	74.4°	− 2.3	95	6	54	1	34°										J. L. Parkes, jr.
Halls Hill	Rutherford		8								1.61		0.72	0.0	3	18	0	13	s.	Ed. F. Wright.
Harriman	Roane	841	15	76.3	− 0.2	94	18	58	11	31	1.20	− 2.78	0.39	0.0	5	6	24	1		Robert R. Ayers.
Hohenwald	Lewis	983	24	75.0	− 0.6	95	18	55	1†	34	2.60	− 1.38	1.08	0.0	6	19	11	1	nw.	John Lutselman.
Iron City	Lawrence		13	76.8		95	18†	56	1	32	1.29	− 2.62	0.54	0.0	5	2	29	0	nw.	Capt. H. P. Seavy.
Jefferson City	Jefferson										5.02		1.49	0.0	11					C. Calvin Maddox.
Johnson City	Washington										4.67		1.29	0.0	12	15	10	6	w.	Ward Crosby.
Johnsonville	Humphreys	364	14	76.4	− 2.2	99	17	56	2	34	2.63	− 0.83	1.96	0.0	5	20	7	4	s.	Miss Sallie B. Matthews.
Jonesboro	Washington	1,740	15																	Robert A. Lovegrove.
Kingston	Roane		19								1.59	− 2.62	0.71	0.0	6	17	0	14		H. Crumbliss.
Knoxville	Knox	977	39	75.5	+ 0.8	90	18	61	23	24	3.86	− 0.14	0.92	0.0	11	7	18	6	ne.	U. S. Weather Bureau.
Lebanon	Wilson	522	1	76.6		94	18	55	27	30	2.45		0.79	0.0	6	17	3	11	n.	Logan Fields.
Lewisburg	Marshall	727	15	77.4	− 0.2	98	17	55	1	37	1.29	− 3.33	0.91	0.0	6	16	12	3	s.	Dr. R. D. Crutcher.
Livingston	Overton																			E. C. Knight.
Loudon	Loudon	816	7								1.68	− 2.26	0.39	0.0	7	27	0	4	w.	Robert W. Clark.
Lynnville	Giles	770	22	75.8	− 1.5	92	18	58	2	27	1.49	− 2.66	0.68	0.0	7	2	29	0	s.	Col. J. H. Burrow.
McGhee	Monroe		6								2.75		1.00	0.0	9	21	0	10	e.	Alice L. Hendricks.
McMinnville	Warren	1,011	26	75.2	− 0.2	93	17	55	1	32	0.94	− 3.05	0.38	0.0	7	13	13	5	s.	J. T. Sparkman.
Maryville	Blount	1,050	14	75.2	− 1.1	92	2†	59	23	28	4.33	+ 0.81	1.01	0.0	11	7	18	6	e.	Mrs. F. E. Benedict.
Mountain City	Johnson	2,486	13	69.5	+ 0.7	88	17	50	29	31	3.74	− 2.10	0.64	0.0	11	15	15	1		E. E. Barry.
Nashville	Davidson	654	39	76.8	− 1.0	94	18	59	27	27	1.73	− 1.74	0.81	0.0	6	12	10	9	ne.	U. S. Weather Bureau.
Newport	Cocke	1,280	20	73.7	− 1.9	88	16	60	14†	22	2.83	− 1.65	1.18	0.0	5	22	6	3	w.	Dr. C. T. Burnett.
New River	Scott	1,215	3								1.80		0.99	0.0	4	25	1	5	sw.	Burl W. Buttram.
Palmetto	Bedford	770	17	77.0	− 0.5	98	18	56	1	34	1.03	− 2.75	0.44	0.0	9	18	12	1	s.	Mrs. Ross Woods.
Pinewood	Hickman		3	75.6°		96	17†	53	2	38°	3.96		3.00	0.0	6	14	10	7	s.	Miss Carrie Cash.
Pope	Perry		13	78.0	− 0.6	97	25†	55	5	34	2.40	− 0.73	2.10	0.0	2	20	11	0	s.	Miss Bessie Howard.
Rogersville	Hawkins	1,150	25	73.6	− 0.2	91	2†	56	11†	29	5.08	+ 0.93	1.28	0.0	11	16	9	6	e.	Fred. Beal.
Rugby	Morgan	1,410	22	71.6	− 1.5	92	17	50	4	40	3.31	− 1.43	1.12	0.0	11	12	12	7	n.	S. G. Wilson.
Savannah	Hardin	442	26	77.0		94	16	57	12	29	0.31		0.16	0.0	2					W. F. Bell.
Sevierville	Sevier		4	73.2		89	3†	56	23	29	3.97		0.92	0.0	10	4	9	18	sw.	H. O. Eckel.
Sewanee	Franklin	2,000	14	75.1	+ 0.7	90	17	60	29	26	1.66	− 2.78	0.79	0.0	3	16	6	9	s.	University of the South.
Sparta	White	920	4	76.5		92	17†	58	3	33	2.86		1.18	0.0	4	12	12	7	w.	E. H. Hull.
Springdale	Claiborne	1,058	20																	Mrs. Lucy E. Breeding.
Springville	Henry	377	7	76.0		97	18	55	27	35	0.86		0.36	0.0	7	24	4	3	s.	H. A. Boden.
Tazewell	Claiborne		13								4.08	− 0.33	1.60	0.0	9	19	2	10	n.	J. C. Carr.
Tullahoma	Coffee	1,075	22	75.2	− 0.1	92	17†	57	1†	31	2.61	− 1.22	1.35	0.0	12	9	20	2	s.	R. T. Moore.
Walling	White	909	7								3.20		1.10	0.0	6	18	3	10		J. K. Roberts.
Waynesboro	Wayne	753	24	76.0	− 0.9	95	17	56	1†	32	1.98	− 1.99	0.60	0.0	8	9	16	6	se.	H. C. Boyd.
Wildersville	Henderson		13	77.3		98	7†	54	27	36	1.15	− 3.43	0.80	0.0	4	19	7	5	s.	W. R. Wilson.
Worsham	Sumner		9								0.86		0.52	0.0	4	22	3	6	w.	J. G. Elizer.
Yukon	Lincoln	850	13	76.2	− 1.6	92	17†	59	1	29	2.76	− 0.89	2.00	0.0	4	15	15	1	w.	W. P. Watson.
Kentucky.																				
Alpha	Clinton		16	72.7	− 3.9	85	4†	57	11	26	2.40	− 2.22	1.10	0.0	5	16	9	6	s.	W. W. Hicks.
Anchorage	Jefferson	700	9	70.8	− 4.0	90	17†	48	27	36	1.51	− 1.24	0.76	0.0	4	24	5	2	se.	C. E. Barrett.
Bardstown‡‡	Nelson	637	14	74.6	− 3.0	97	17	52	27	35	6.38	+ 2.97	2.00	0.0	6	18	1	12	se.	G. M. Talbott.
Beattyville‡‡	Lee	650	7	72.6		94	18	48	27	37	5.16		1.04	0.0	9	10	4	17	e.	G. W. Cann.
Beaver Dam‡‡	Ohio	441	7	73.9		94	18	48	27	38	1.15		1.10	0.0	2	19	4	8	ne.	T. S. Woodward.
Berea	Madison	1,070	9	73.1	− 1.4	95	17	48	27	38	6.09	+ 1.50	2.50	0.0	6	24	4	3	sw.	C. F. Rumold.
Bowling Green‡‡	Warren	500	21	76.2	− 2.7	96	18	52	27	36	1.03	− 2.43	0.58	0.0	6	19	2	10	n.	Mrs. L. G. Causey.
Burnside	Pulaski	773	20								3.44	− 0.67	1.40	0.0	7	17	4	10	n.	G. M. Estes.
Cadiz	Trigg		8	76.0[d]		96[d]	17†	52[d]	27	35[d]	0.16		0.12	0.0	2	20[d]	4[d]	3[d]		F. T. Street.
Calhoun	McLean	397	7	76.4		98	17	52	27	36	3.61		2.65	0.0	5	11	20	0	se.	W. A. Taylor.
Catlettsburg	Boyd	544	17								2.06	− 1.59	1.40	0.0	7	25	0	6	nw.	Mrs. Mertie M. Bruns.
Earlington‡‡	Hopkins	370	21	76.8	+ 0.2	99	17	49	26	42	0.70	− 2.48	0.35	0.0	4	20	5	6	se.	J. B. Atkinson.
Edmonton	Metcalfe	600	19	73.8	− 1.2	93	16	52	27	33	2.19	− 1.19	0.52	0.0	9	16	10	5	s.	Miss Lee Ray.
Eubank‡‡	Pulaski	1,177	16	71.6	− 2.4	91	17	53	20†	33	4.01	+ 0.23	1.08	0.0	9	19	0	12	ne.	W. H. Henderson.
Falmouth	Pendleton	530	21								2.47	− 0.97	0.97	0.0	5	20	8	3	s.	J. V. Oldham.
Farmers	Rowan	668	5	71.9		93	18	46	27	38	5.01		1.68	0.0	8	12	16	3	e.	Miss Gertrude Sorrell.
Frankfort	Franklin	560	20	73.4	− 1.3	90	17	51	27	32	3.37	− 0.05	1.17	0.0	6	20	4	7	ne.	J. H. Roberts.
Franklin	Simpson	691	17	75.8	− 1.3	93	17†	53	27	32	1.13	− 2.20	0.55	0.0	3	2	29	0	ne.	J. E. Newman.
Greensburg‡‡	Green	581	18	71.4	− 4.6	94	18	48	27	38	2.33	− 1.31	0.65	0.0	9	18	0	13	n.	L. C. Alcorn.
Highbridge	Jessamine	762	8								3.31		1.40	0.0	8	22	3	6		Miss Lulu Wood.
Hopkinsville‡‡	Christian	524	14	77.7	− 0.5	100	17†	54	27	39	0.64	− 2.05	0.30	0.0	4	21	3	7	n.	W. F. Randle.
Irvington	Breckinridge		12	72.8	− 3.7	91	18	50	27	27	4.14	+ 0.56	2.35	0.0	5	23	4	4	ne.	W. J. Piggott.
Leitchfield	Grayson	635	15	72.8	− 2.7	90	18	51	27	28	2.28	− 0.83	1.16	0.0	4	19	11	1	ne.	John E. Stone.
Lexington	Fayette	989	23	72.6	− 2.0	91	17	51	27	26	4.15	+ 0.58	1.48	0.0	9	14	7	10	se.	U. S. Weather Bureau.
Loretto	Marion	681	13	72.6	− 3.4	97	28	48	27	44	3.27	− 0.10	1.60	0.0	5	25[a]	2[a]	3[a]		Loretto Academy.
Louisville	Jefferson	525	38	75.4	− 1.1	94	17	53	27	30	2.31	− 1.20	1.51	0.0	5	17	9	5	se.	U. S. Weather Bureau.
Marion	Crittenden		16	75.7	− 2.8	95	18†	49	27	34	0.89	− 1.48	0.46	0.0	2	20	6	5	nw.	B. C. Paris.
Maysville‡‡	Mason	524	14	73.5	− 3.2	96	30	47	27	40	2.33	− 1.11	1.16	0.0	5	14	11	6	nw.	Mrs. Mary D. Marsh.
Middlesboro	Bell	1,128	17	75.2	+ 0.7	92	2†	56	13†	33	2.47	− 0.95	0.70	0.0	11	20	11	0		B. H. Perkins.
Mount Sterling‡‡	Montgomery	930	21	72.5	− 1.4	91	18†	51	27	32	3.26	− 0.68	1.38	0.0	8	20	3	8	s.	James O'Connell.
Owensboro‡‡	Daviess	479	14	74.6	− 2.1	91	17†	57	28	26	1.24	− 1.60	0.45	0.0	7	16	5	10	se.	Henry S. Berry.
Owenton	Owen	700	14	73.7	− 1.8	90	18	48	27	27	1.40	− 1.58	1.07	0.0	4	7	22	2		J. T. Walker.
Paducah‡‡	McCracken	341	17								2.20	− 0.76	1.06	0.0	5	22	0	9	s.	S. A. Fowler.
Pikeville	Pike		1								3.52		1.10	0.0	8	16	3	12	n.	A. R. Williams.
Richmond‡‡	Madison	926	21	73.8	− 1.7	94	17	51	27	31	3.68	+ 0.57	0.87	0.0	10	18	2	11		J. W. Crooke.
St. John‡‡	Hardin	777	14	72.0	− 2.8	93	17	49	27	35	3.14	+ 0.20	1.22	0.0	6	25	2	4		Bethlehem Academy.
Scott	Kenton		13	73.4	− 2.3	94	30	49	28	37	0.97	− 2.06	0.81	0.0	5	20	9	2	nw.	E. B. Wilson.
Shelby City	Boyle	1,087	16	72.2	− 2.5	96	17	47	27	39	3.74	+ 0.75	2.17	0.0	7	15	9	7	n.	W. E. Grubbs.
Shelbyville‡‡	Shelby	759	21	76.0	+ 0.6	96	17†	49	27	40	1.81	− 1.22	0.69	0.0	6	23	3	5	s.	O. M. Lynch.
Taylorsville	Spencer	422	8	77.8		90	15†	50	27	31	4.52		1.72	0.0	6	16	12	3	ne.	E. D. Bourne.
Williamsburg‡‡	Whitley	939	13	74.4	− 1.9	95	17	58	2†	33	3.33	− 1.30	2.37	0.0	5	12	0	19	e.	Noble C. Jones.
Williamstown‡‡	Grant	943	8	73.2		92	17	50	27	31	2.00		0.91	0.0	6	24	2	5		Mrs. Sarah E. Carter.
Indiana.																				
Anderson	Madison	892	15	72.0	− 1.0	94	17	44	27	44	0.90	− 2.99	0.39	0.0	6	19	7	5	sw.	W. H. Stanton.

TABLE 1.—*Climatological data for August, 1910. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana—Cont'd.																				
Bloomington	Monroe	744	15	71.8	− 3.1	94	17	45	27	36	1.91	− 1.71	0.95	0.0	6	17	10	4	sw.	Earl E. Ramsey.
Bluffton	Wells	835	15	72.0	− 0.1	97	15	42	27	43	1.35	− 1.85	0.37	0.0	7	16	13	2	sw.	Prof. P. A. Allen.
Butlerville	Jennings	767	25	73.1	− 1.4	93	17†	46	27	39	1.86	− 1.65	0.83	0.0	5	23	5	3	.....	C. F. Hole.
Cambridge City	Wayne	941	19	70.2	− 1.4	95	15	38	27	44	0.42	− 2.50	0.22	0.0	5	27	1	3	ne.	Charles Lemberger.
Columbus	Bartholomew	632	27	71.4	− 2.3	95	17	43	27	42	1.14	− 2.16	0.69	0.0	6	21	6	4	e.	John A. Perry.
Connersville	Fayette	769	28	72.0	0.0	96	17	42	28	44	1.11	− 1.79	0.62	0.0	5	21	7	3	w.	C. C. Hibbs.
Delphi	Carroll	668	25	72.4	+ 0.6	96	14†	45	27	42	2.29	− 0.78	1.02	0.0	9	9	12	10	.....	L. A. Higginbotham.
Eminence	Morgan	782	4	70.6	.....	94	18	43	27	35	1.65	.....	1.30	0.0	3	23	6	2	sw.	Dr. E. E. Kelso.
Evansville	Vanderburg	386	34	76.0	− 1.0	93	17	60	8	28	0.96	− 2.28	0.37	0.0	7	10	19	2	s.	U. S. Weather Bureau.
Farmersburg	Sullivan	.....	12	72.1	− 3.4	91	17†	46	28	34	1.05	− 1.80	0.35	0.0	5	12	15	4	sw.	Maurice Yeager.
Farmland	Randolph	1,101	28	71.0	− 0.2	93	17	47	27†	33	0.97	− 2.69	0.57	0.0	4	21	1	9	nw.	W. J. Davisson.
Greenfield	Hancock	905	7	70.0	.....	88	17	49	27	29	1.00	.....	0.41	0.0	5	4	23	4	sw.	Prof. W. C. Goble.
Greensburg	Decatur	954	14	72.9	− 1.5	94	17	49	27	31	0.97	− 1.26	0.49	0.0	4	20	6	5	sw.	Chas. H. Ewing.
Huntingburg	Dubois	.....	2	75.3	.....	96	17	47	27	38	2.83	.....	1.71	0.0	3	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	17	71.7	− 0.8	94	14	47	27†	38	4.26	+ 0.83	1.20	0.0	9	16	10	5	sw.	Chas. McGrew.
Indianapolis	Marion	822	39	72.8	− 0.8	90	17	53	27	27	2.75	− 0.58	1.32	0.0	5	11	13	7	s.	U. S. Weather Bureau.
Jeffersonville	Clark	455	28	73.8	− 2.3	93	18	48	27	32	1.43	− 1.85	0.79	0.0	4	17	12	2	nw.	John C. Loomis.
Judyville	Warren	.....	3	70.2	.....	93	14	41	26	42	2.37	.....	0.86	0.0	7	15ª	6ª	9ª	s.	Dale R. Warrwick.
Kokomo	Howard	840	18	71.0	− 1.6	95	15	42	26	42	2.51	− 0.89	1.29	0.0	4	13	12	6	sw.	P. H. Robertson.
Lafayette	Tippecanoe	617	31	71.7	− 0.9	92	17†	47	27†	36	2.50	− 0.82	1.10	0.0	10	18	6	7	s.	Wm. J. Jones, jr.
Logansport	Cass	620	30	73.4	+ 0.9	101	15	45	27	43	2.65	− 0.18	1.65	0.0	6	18	5	8	w.	Chas. Massena.
Madison	Jefferson	460	18	74.6	− 1.9	94	17	48	27	39	1.06	− 1.67	0.56	0.0	5	21	5	5	w.	Dr. J. Cooperider.
Marengo	Crawford	363	28	70.6	− 4.1	90	17†	43	27	38	0.54	− 3.41	0.21	0.0	4	18	11	2	sw.	J. M. Johnson.
Marion	Grant	814	24	72.0	− 0.4	95	17	45	26†	38	1.94	− 1.12	0.88	0.0	7	19	5	7	s.	James F. Hood.
Markle	Huntington	814	15	70.5	− 0.8	96	15	41	27	46	3.70	+ 0.97	1.40	0.0	7	10	18	3	sw.	I. S. Shideler.
Mauzy	Rush	980	30	70.6	− 0.4	95	17	42	27	41	4.13	− 1.15	2.47	0.0	8	18	8	5	sw.	Elwood Kirkwood.
Monticello	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.81	.....	1.27	0.0	6	19	10	2	s.	J. E. Loughry.
Moores Hill	Dearborn	.....	9	73.0	.....	94	17	48	27†	37	1.42	.....	1.06	0.0	5	23	5	3	nw.	W. S. Bigney.
Mount Vernon	Posey	410	24	74.8	− 3.1	92	17	52	27	36	1.64	− 1.47	0.70	0.0	6	23	0	8	n.	Chas. M. Spencer.
Paoli	Orange	611	13	72.1	− 3.3	95	31	40	27	44	0.67	− 3.03	0.24	0.0	7	14	16	1	sw.	James A. Gillum.
Princeton	Gibson	481	28	73.8	− 1.6	96	17	47	27	38	1.61	− 1.56	0.86	0.0	4	27	3	1	sw.	Elisha Jones.
Richmond	Wayne	972	25	70.2	− 0.9	93	17†	41	27	42	0.81	− 2.93	0.50	0.0	5	16	11	4	.....	Walter Vossler.
Rochester	Fulton	775	7	72.4	.....	91	15	50	26	29	3.51	.....	1.56	0.0	8	18	7	6	.....	G. P. Keith.
Rockville	Parke	722	24	71.4	− 1.6	88	17†	48	26	28	2.29	− 0.59	1.10	0.0	6	15	6	10	s.	Dr. W. N. Wirt.
Rome	Perry	370	7	76.0	.....	97	17†	50	27	38	2.47	.....	1.23	0.0	8	25	3	3	w.	Adam Anspach.
Salamonia	Jay	.....	5	70.0	.....	94	17	40	27	41	1.90	.....	1.06	0.0	7	14ª	5ª	11ª	sw.	Chas. V. Skinner.
Salem	Washington	717	17	71.7	− 3.6	93	17†	43	27	41	1.03	− 1.96	0.26	0.0	6	19	11	1	w.	Emmet S. Allen.
Scottsburg	Scott	570	16	74.6ᵉ	− 1.5	93ᵉ	17	49ᵉ	27	33ᵉ	2.54	− 0.25	2.02	0.0	5	16ᵇ	9ᵇ	4ᵇ	s.	Frank H. Park.
Seymour	Jackson	610	23	72.5	− 1.9	95	17	46	27	40	2.27	− 1.16	1.12	0.0	7	17	13	1	sw.	J. Robt. Blair.
Shelbyville	Shelby	.....	6	71.4	.....	94	17	46	28	38	2.00	.....	1.00	0.0	6	11	14	6	sw.	Edgar A. Hodson.
Terre Haute	Vigo	498	20	74.4	− 1.6	92	15	50	27	31	2.26	− 0.73	0.58	0.0	6	18	8	5	sw.	Prof. R. G. Gillum.
Veedersburg	Fountain	612	11	72.2	− 1.8	92	15†	44	27	38	3.08	− 0.11	1.81	0.0	8	20	8	3	s.	L. A. Culver, jr.
Vevay	Switzerland	525	29	74.4	− 1.1	94	18	50	27	34	0.50	− 2.51	0.20	0.0	3	10	18	3	sw.	Miss Frederica Boerner.
Vincennes	Knox	431	18	74.1	− 2.7	97	17	49	28	36	1.05	− 1.97	0.35	0.0	6	15	12	4	s.	Garrett V. List.
Washington	Daviess	484	14	73.6ᵉ	− 2.3	91ᵉ	17†	56	13	30ᵉ	1.60†	.....	0.93†	0.0	6†	17†	3†	5†	e.	Homer B. Turrell.
Whitestown	Boone	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. A. Stevenson.
Winona Lake	Kosciusko	.....	3	71.6	.....	95	14	45	27†	41	2.48	.....	1.00	0.0	6	4	24	3	sw.	Rev. Albert A. Young.
Worthington	Greene	526	28	72.3	− 1.3	92	17	48	27	32	1.40	− 1.91	0.82	0.0	7	21	10	0	se.	D. W. Solliday.
Illinois.																				
Albion	Edwards	531	19	74.8	− 1.9	96	17	50	27	31	3.53	+ 0.24	1.23	0.0	8	21	8	2	s.	B. F. Michels.
Charleston	Coles	720	25	72.0	− 2.3	91	15†	45	27	32	3.75	+ 0.85	1.72	0.0	7	10	15	6	s.	Jacob B. Daisy.
Danville	Vermilion	604	9	72.6	.....	93	30	45	27	37	2.12	.....	1.07	0.0	6	17	5	9	s.	J. J. Lemon.
Equality	Gallatin	421	12	73.9	− 2.5	95	17†	49	27	35	3.94	+ 0.57	2.18	0.0	7	18	12	1	s.	Dr. L. W. Gordon.
Fairfield	Wayne	495	17	74.7	− 1.3	97	17	46	27	36	1.54	− 1.49	1.18	0.0	5	26	1	4	nw.	Geo. A. Tromly.
Flora	Clay	495	24	74.8	0.0	99	17†	47	27	39	1.60	− 1.79	0.66	0.0	5	21	9	1	se.	Jos. S. Peak.
Golconda	Pope	500	32	77.0	− 0.8	98	17†	52	27	36	3.58	+ 0.48	1.61	0.0	6	19	6	6	sw.	Dr. D. Lawrence.
Hoopeston	Vermilion	715	8	71.6	.....	90	2†	45	26	33	2.23	.....	1.16	0.0	9	20	4	7	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	27	75.0	− 0.7	97	30	49	27	39	2.57	− 0.85	1.78	0.0	4	21	4	6	w.	C. C. Judd.
Martinsville	Clark	630	22	73.3	− 1.5	95	30	46	27	37	2.89	− 0.23	0.75	0.0	6	14	6	11	n.	G. M. Daugherty.
Mount Carmel	Wabash	424	9	73.5	.....	92	17	51	27	29	3.14	.....	1.00	0.0	6	18	6	7	n.	Mrs. H. M. Phillips.
New Burnside	Johnson	556	15	74.0	− 4.1	93	17†	48	27	39	1.81	− 0.70	1.22	0.0	4	22	5	4	e.	Geo. Harris.
Olney	Richland	486	23	74.8	− 1.5	96	30	49	27†	36	2.10	− 0.85	0.91	0.0	8	9	12	10	sw.	Victor E. Phillips.
Palestine	Crawford	500	28	73.6	− 0.6	94	30	47	27	35	0.59	− 2.84	0.30	0.0	6	13	15	3	sw.	Duane Shaw.
Paris	Edgar	600	17	71.7	− 3.5	91	15†	46	27	33	1.63	− 1.15	0.73	0.0	4	19	12	0	sw.	H. P. Twyman.
Philo	Champaign	700	26	70.8	− 1.9	92	15	44	26†	36	2.18	− 0.64	0.83	0.0	5	19	10	2	s.	H. A. Burr.
Rantoul	....do	768	19	72.2	− 1.6	93	2†	43	26	37	2.13	− 1.08	0.98	0.0	6	22	6	3	se.	Wm. Breiner.
Robinson	Crawford	500	10	73.7	− 1.6	93	30	47	27	35	1.65	− 1.94	0.77	0.0	3	18	4	9	se.	A. P. Woodworth.
Sumner‖	Lawrence	459	4	73.6	.....	92	17	48	27	31	1.65	.....	0.42	0.0	7	12	15	4	s.	O. A. Fyffe.
Tuscola	Douglas	644	17	71.9	− 2.2	93	17†	41	26	42	1.42	− 1.80	0.65	0.0	6	20	4	7	ne.	E. W. Lester.
Urbana‖	Champaign	725	8	71.0	.....	90	15†	46	26	35	2.62	.....	0.87	0.0	6	9	17	5	se.	Prof. J. G. Mosier.

ª, ᵇ, ᵉ, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
‖ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
| Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 3, Ohio Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New York.																																	
Allegany	Allegheny		.09						T.	1.23	.33					T.	.03		.35	.36			.02				.68				.24		3.33
Bolivar	do								.56		1.25								.59	.30			.01				.78					.01	3.50
Franklinville	do		.05	.05	.25	.17					1.64								.80				.42			.76						.41	4.55
Olean‖	do	T.		.02						.05	1.00	.06					.09	.07		.78				T.			.55						2.62
Pennsylvania.																																	
Aleppo	Ohio								.04		.23									.05							.52					.28	1.12
Baldwin	Allegheny								T.		.75	.02							.45	.15							1.56						2.93
Beaver Dam‖	Ohio								.02		.38	.27								1.02							1.55						3.24
Bradford	Allegheny			.03							.80					.02			.11	.18							.72					.05	1.89
California	Monongahela																																
Clarion	Allegheny			.01	T.						.04	1.00															1.74						2.79
Claysville	Ohio				T.				.06		.29	.16				T.				.43							1.09					.14	2.17
Confluence‖	Youghiogheny								.08	.04	.32	.14				.04				1.16							.10						1.88
Davis Island Dam‖	Ohio								.04		.21	.14								.35							.82						1.56
Derry Station	Allegheny								.15		.48	.17							.06								.83					.10	1.79
Franklin	do										.30	.10					.08			.12							.90						1.50
Freeport‖	do				.03				.07		.30	.11								.50				T.			.80						1.81
Greensboro‖	Monongahela								T.		.20	.06				.14				.80							.40						1.60
Greensburg	Youghiogheny				.03			T.	.10		.63	.23	.33						T.	.29							.75					.20	2.56
Greenville	Ohio			.03		.03				.20	.50									T.							.69						1.45
Grove City	do										.36	.10				.10			.45	.04							1.04						2.09
Herrs Island Dam‖	Allegheny				T.				.05	T.	.21	.13				.95				.29							.77						2.40
Indiana	do								.06		1.13								.98	.32							.50						2.99
Irwin	Monongahela								.08		.37	.18								.11							.57					.31	1.62
Johnstown	Allegheny																																
Lock No. 4‖	Monongahela								.10		.48	.75				T.				1.48							.50						3.31
Lycippus	Allegheny								.18		.73	.34	.54							.25							.38					.07	2.49
Parkers Landing‖	do				T.				T.		.48									.44							1.24						2.16
Pittsburg	Ohio				T.				.06	.01	.37				.92				.25	.02							.83					.01	2.47
Saegerstown	Allegheny		.03		.07					.08	.72					.01				T.							.80					.12	1.83
Saltsburg‖	do	T.				T.			.04		.20	.58								.64							.58						2.04
Skidmore	Ohio			.20															.35														0.55
Somerset	Youghiogheny									.30		.90						.75														.45	2.40
Springdale‖	Allegheny				.02				.06		.23	.06				1.00				.25							.68						2.30
Uniontown	Monongahela								T.		.20				.30					.90							.40					.44	2.24
Warren	Allegheny										1.40	.18					.06			.20							1.06						2.90
West Newton‖	Youghiogheny				T.				.10	T.	.36	1.60								.56							.78						3.40
Maryland.																																	
Deer Park	Youghiogheny				.23				.26			.61							.54								.42					.55	2.61
Grantsville	do									.05	.35									.61							.05					.83	1.89
Oakland	do				.27				.23		.13	.17								.40							.41					.75	2.36
West Virginia.																																	
Bancroft‖	Great Kanawha				.12						.98									.05			.05				.07	.05					1.32
Beckley	do			.42				.10	.45				.75												.86					.20	1.01	3.79
Ben's Run	Ohio								.29		1.11								.10	.06							.35					.13	2.04
Bluefield	Great Kanawha		.25	.01	.12			.10	.02		.01			.01			.35		.02	.50	.02		.25				.50	.20			.11	.12	2.59
Brandonville‖	Monongahela										.48	.06				.36				.64							.21						1.75
Buckhannon	do										.46									.18		.20					.25					.88	1.97
Cairo	Little Kanawha				.22						.62									.12							.32				.05	1.20	2.53
Central Station	Middle Island Creek				.61			T.	.05		.67								T.	.03		.80					.27					.52	2.95
Charleston‖	Great Kanawha				.11				.08		.22												.37										0.78
Creston‖	Little Kanawha				.92				T.		.35	T.								.14							.01	T.					1.42
Cuba	Sand Creek			.03	.02			T.			.84									.61							.31					.16	1.97
Davis‖	Monongahela				.25				.10		.30									.20		.25		.05			.40					.10	1.65
Elizabeth	Little Kanawha																																
Elkhorn	Big Sandy			.15				.15			.10		.16						.22	.02	T.	.25	.15			.15	T.	.47			.07	.40	2.29
Elkins	Monongahela				.23			.01	.06		.38		.04							.07		1.57					.13					.21	2.70
Fairmont	do				.40			.25		.60	.18									.50							.30					.60	2.83
Glenville‖	Little Kanawha				.20				T.		.45									.18							.20	T.					1.03
Grafton	Monongahela				.05			T.	T.		.41	.10			T.					.17							.33					.95	2.01
Green Sulphur Springs	Great Kanawha		.17	.05				T.	.49		T.		.07			.06	T.			.76		.47	.09			T.	.39					.35	2.90
Hinton‖	do		.50		.02				.01	.10				.01			.64			.14	.16		.16	T.			.28	.24				.12	2.38
Huntington‖	Ohio				.58						.90									.40							.10	.06				.08	2.12
Lewisburg	Great Kanawha	.18		.22	.29			.03	.05		.03		1.71			T.	.18			.34		.11				.06	.37	.12				.08	3.77
Logan	Guyandotte							.11	.35	.12										.38		T.					.45					.82	2.23
Lost Creek	Monongahela			.40			T.	T.		.31										.32			1.68				.24				1.12	4.07
Madison	Great Kanawha								.25		.10	.06							.15	T.		.02					.04	.08				T.	0.70
Mannington	do			.01				.09		.38	.02								.10	.22							.37					.88	2.07
Marlington	do				.72			.41					.82							.24		1.25	1.05				.19					.90	5.58
Morgantown	Monongahela				T.				.12		.16					.20			.85								.32					.67	2.32
Moundsville	Ohio				T.				.09		.46									.40							.93					.11	1.99
New Cumberland	do		T.					T.			.65	.15					T.		.75	.15													1.70
New Martinsville	do										.37																.54					.18	1.09
Nuttallburg	Great Kanawha			.65	.10				.08		.31				.05				T.	.36		.45				T.	.21					.40	2.61
Parkersburg	Ohio							T.	.01	T.	.48								.04	.16							.35					.15	1.19
Parsons	Monongahela			.25	.15					.16																	.16					.20	0.92
Philippi	do				.35			.02	.03		.12	.08								.18			.19				.30					.87	2.14
Pickens	do			.59	.31				.08	.03	T.				.62	.43				.83		.24					.32					.22	3.67
Pineville	Guyandotte				.17		.35	.37	.17				.67	.13						.82		T.					1.27						3.95
Point Pleasant‖	Ohio				.04						.48									.12							.14	.10					0.88
Powellton	Great Kanawha																																
Princeton	do	.10		.10																.10		.10	.15				.70				.10	.15	1.50
Robertsburg‖	do				.24						.45								.15								.08	.07				T.	0.99
Rowlesburg‖	Monongahela				.72	.06			.06		.04	.20								.14	T.		.06				.34	.10					1.72
Ryan	Great Kanawha			.04	.05			T.			1.07			T.						18							.09					.53	1.96
St. Marys‖	Ohio								.03		.65	.05								.20							.25	.05					1.23
Smithfield‖	Fishing Creek								.13		.14	.56								.12							.21	.06					1.22
Spencer‖	Little Kanawha			T.							.65																.05						0.70
Sutton	Great Kanawha																																
Terra Alta	Monongahela				.23				.12										.17									.36	.12			.59	1.59
Union	Great Kanawha				.09					.17		T.								.08	.15			.33			.57					.63	2.02
Valley Fork	do			.15									.10							.88							.20					.75	2.06
Webster Springs	do			.55	T.		.35	T.		.30	.15									.53		.37					.52					.10	2.87
Wellsburg	Ohio							T.	.19		.70	.05							.33	.08							1.10					.07	2.52
Weston‖	Monongahela				.40	.08			.08	.20	.30									.54			.13				.12	.08					1.93
Wheeling‖	Ohio				T.				.01	T.	.40	T.				T.				.44							.80						1.65
Williamson‖	Big Sandy				.26				.30		.18									.42	.08						.20	.18				.16	1.78
Ohio.																																	
Amesville	Ohio				.45				T.		.40								.65	.13							.71					.16	2.50
Bangorville	Muskingum		.53	T.						.20	.03								.03	.04	T.	T.				T.	.62						1.45
Bellefontaine‖	Great Miami							.07			.17									.14			.62				.48						1.48
Bladensburg	Muskingum							T.		T.	.08								.02	T.						.43							0.53
Cadiz	Ohio		T.					T.	.05	T.	.73						.24		.14	.20							.97				T.		2.33
Cambridge	Muskingum								T.		.38								.46	.28							.98				T.		2.10

TABLE 2.—*Daily precipitation for August, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ohio—Cont'd.																																	
Camp Dennison	Ohio			.11				.07		.06	.25									T.							.94						1.43
Canal Dover	Muskingum		T.	.04							.23	.56							.62	.04							.62						2.11
Canton‖	do		T.							.13	.37								T.	.02							.95						1.47
Cardington	Scioto		.16	.15				T.		.11	T.								.08		T.	T.				T.	.63						1.13
Chillicothe‖	do				.05																					.09							0.14
Cincinnati	Ohio							.22		.23																.71	.10						1.26
Circleville‖	Scioto				T.				T.		.03									.27							1.03						1.33
Clarington	Ohio				T.				.05		.30								T.	.05							.82					.15	1.37
Columbus	Scioto			.04				.01	.02	.03	T.								.01				T.			.20	.11						0.42
Coshocton‖	Muskingum								.04		.12									1.40							.52						2.08
Dayton‖	Great Miami								.08		.04									T.							.35						0.47
Delaware	Scioto		.20	.01				T.		.02	T.								.03	.02	T.	T.				T.	.40						0.68
Demos	Ohio								.08	T.	.44				T.				.07	.05							1.05					.12	1.81
Dennison	Muskingum		.01					T.	.02		.27	.25	T.						.87	.22							.62					.01	2.27
Frankfort	Scioto				.25					.20	.20																.80					T.	1.45
Garrettsville	Mahoning		.04							.05	.36								T.								.52					T.	0.97
Granville‖	Muskingum								.04		.04	.22					T.	.56		.24		T.					.38						1.48
Gratiot	do							T.	.12	.01	.18						T.		.25								.75						1.31
Green	Ohio			.15							.20									1.00							.80						2.15
Green Hill	Muskingum		.07							.06	.07						T.		.26	.02							.87						1.35
Greenville	Great Miami								.06		.03									.02							.43						0.54
Hillsboro	Scioto			.45				.05			.31								1.68								.66			T.	T.	T.	3.15
Ironton	Ohio			.04	.02			.02			.70								.02	.18							.33					.08	1.39
Jacksonburg	Great Miami							.10		.06									.22							.60							0.98
Kenton	Scioto		.19							.05	.03								.06								.42					1.17	1.92
Killbuck	Muskingum		.40							T.	.06						.21		.58								.50						1.75
Lancaster	Ohio			T.				T.	.05	.10	.35								.10	.09							1.00					T.	1.60
Lawshe	do			.13				.07		.01					.22				.06	.03							.78					.25	1.55
McConnelsville	Muskingum			.29				T.	.15		.60						T.		.24								.93					.15	2.36
Marietta	Ohio										.50								.19	.10							.43					.71	1.93
Marion	Scioto		.16							.18									.10			T.				.65						.22	1.31
Milfordton	Muskingum							T.			.04									.05								.18					0.27
Milligan	do								.12		.33								.15								1.20					.09	1.89
Millport	Ohio		.06							T.	.20						T.		1.08	.05							1.05						2.44
Nellie	Muskingum		T.							.08							.05	T.	.10								.75						0.98
New Alexandria	Ohio							T.	.23	T.	.45								.65							1.00					T.	2.35
New Berlin	Muskingum									.06	.67								.20								.70						1.63
New Waterford	Ohio								T.		.60						T.			.70							.96						2.26
Ohio State University	Scioto		T.	T.					T.	.05									.03								.28						0.36
Pataskala	Muskingum							T.	.07	.04	.04						.19		.02		T.						.23						0.59
Philo (1)	do								.17	T.	.25						T.		T.								.65					T.	1.07
Piqua‖	Great Miami										*	.09								.08							.44						0.61
Plattsburg	do							T.		.10											T.	.05					.17						0.32
Pomeroy	Ohio																																
Portsmouth‖	do				.35				.06		.53									1.26							1.03						3.23
Prospect‖	Scioto																			.20								.90					1.10
Rittman	Muskingum									.34									T.							.70							1.04
Shenandoah	do									.20	.07								T.								.90					T.	1.17
Sidney	Great Miami		.05					T.		.08																	.40					2.80	3.33
Somerset‖	Muskingum				T.				.10		.32							.29		.15							1.03						1.89
Springfield	Great Miami		T.					T.	.04	.04									T.							T.	.34						0.42
Summerfield	Ohio				.10				.20		.29				T.				.44								.93					.08	2.04
Thurman	do			T.				T.											.74								1.00					T.	1.74
Urbana	Great Miami		.11							T.									T.								.92					.13	1.16
Warren	Mahoning				T.					.21						T.		T.									.63						0.84
Waverly‖	Scioto				.06				.07		.17							.34		.08								.92						1.64
Waynesville	Great Miami							.07		.07																	.47						0.61
Wooster	Muskingum		T.		T.			T.		.04	.28						.15	.02	T.	.02							.44						0.95
Youngstown‖	Mahoning										.23	.08								.88							.80						1.99
Zanesville‖	Muskingum								.13		.53	.05						.05		.14							.70						1.60
Virginia.																																	
Big Stone Gap	Tennessee				.57			.50	.04				.23						.35	1.45		.15	.27			T.	1.15			T.	.16	4.87	
Blacksburg	Kanawha				.21			.20	.02						.27							.15	.04			.27	1.02	.04			.06	.04	2.32	
Burkes Garden	Tennessee			T.	1.22			.31	.66							T.				T.			.68				.52	.06			.13	.50	4.08	
Elk Knob	do				.85	T.		.39	.05		.02		.20	.37						.60	T.	.13	.13			.09	.54	T.			.48	.15	4.00	
Galax	Kanawha				.06			1.20					1.80	.20								.10					.05				.30	1.10	4.81	
Ivanhoe‖	do			.03	.33	.11			.25	.02				.05	T.		.10				.08		.28	T.	T.	.03	.05	.40			.01	.54	2.28	
Lebanon	do		.03		.48			.91	.22		.12		.21							.36				.25			.05	.43				.34	3.40	
Marion	Tennessee		.40		.27	.46			*	1.10		.06						.49		.72		.16				T.	.62				*	.25	4.53	
Max Meadows	Kanawha																																
Mendota‖	Tennessee				.66				.66												*	1.22	.10	.10			.20				.20	3.14	
Radford‖	Kanawha				.60	.04			T.	.10							.62					*	.88	.04		.20		1.20				.12	3.80	
Speers Ferry‖	Tennessee				.62				.84		.28			.35				.30			.90		.22					.28				.75	4.54	
Wytheville	Kanawha	.04		1.07	.06			.26	.06		T.					T.			T.	.09		.99	T.				.40	.02			.23	.48	3.70	
North Carolina.																																	
Altapass‖	Tennessee																																
Andrews	do				1.48	.01	.83	.32	.10		.01	.01	.01	.39	.01			.21	.03	.41		.02	.01			.08						.30	4.23	
Asheville	do	.02	.11	T.	T.		.27	1.83	.05		T.	.06	.11	T.	.08	T.				.13		.01	T.	.01	.05	.16	.14		T.	.02	2.56	3.51	9.12	
Banners Elk	do	1.80	.94		.34			.73	.52					.07	.45					.62		.59	.32	.04			.15				.98	1.32	8.87	
Brevard	do		1.80	.35	.15	T.	T.		T.					.60	T.	T.				.16		.42	.38	.15	.22	.40	.10	T.		1.80	5.70	12.23	
Bryson City‖	do		.25	.20	.12	.25		.05						.39	.53							.82	.04					.03	.45			.24	3.37	
Cullowhee	do		.48	.40	.10		.07	.20	.03		T.		T.	.03	.11		.03	T.	.03	.43		.17	T.	.10	T.	.10	.09	T.			.19	1.03	3.59	
Hendersonville	do	.20	.70	1.40		.50		.41	.15					.35		.07			.04	.04			.17		T.	.39	.97				2.45	3.90	11.74	
Highlands	do		.10	.80			.20							.30	.47		.26	.01		.32			.04			.88	.12				.70	2.25	6.45	
Hot Springs	do			.79	.53		T.	.32	.57		T.			.49	.30			T.		.78						T.	T.				.65	.53	4.96	
Jefferson	Great Kanawha	1.48	T.		.50				.40				.39	.22	.08	.09			.29	.17		.37				.08		.01			1.63	1.25	6.96	
Marshall	Tennessee	.60			.23		.05	.12	.22				.23	.30	.05					.68			.08			.09					.40	1.70	4.75	
Murphy‖	do					.65			.98										.50		.30	.98	.75	.40				.40	.99			.30	6.25	
Rock House	Savannah		.04	.05	.13		.11	.07		T.				.22	.15	.16	.07	T.	1.43	.16			.09		.65	.38	.07				1.19	3.63	9.20	
Waynesville‖	Tennessee		.11	.33	.03	.01	T.	.21	.11	.01		T.		T.	T.	.01				.38	.57	T.	.02	.82	.11	.05	.01	.17			.07	3.72	6.74	
Georgia.																																	
Diamond	Tennessee				.92		.35	1.24			.14			.05					.05	.44			.10		.09	.10	T.					.50	3.98	
Lafayette	do				1.34	.10	.31	.26	.24		.51					.57										.36						.17	3.86	
Alabama.																																	
Bridgeport	Tennessee			.30		.90		.17	.10		.60										.53						.10					.30	3.00	
Decatur	do				.02				.18		.20										.10			.78			.27					T.	1.55	
Florence	do								.14		.08										.76		.36		.16								1.50	
Guntersville	do					.68		.10	.08		.44		T.								.30							.50				T.	2.10	
Madison	do			T.			T.	.26	.37	.55			.05							.37						T.							1.60	
Riverton	do								.40		.14												.12		.12								0.78
Scottsboro	do			.26		.31	.05	.28		T.	.04	T.								.24	T.					.09				T.			1.27	
Tuscumbia	do							.06	.04		T.		.20							T.	1.76		.04		.22								2.41
Tennessee.																																	
Ashwood	Tennessee								.20	.20													.60	.20								.20	1.40	

TABLE 2.—*Daily precipitation for August, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Tennessee—Cont'd.																																	
Benton	Tennessee				.15			2.50			.24							.06		.35						.67					1.00	4.97
Bird's Bridge	do				1.38	T.			1.35											.05	.62						.08		.50			.49	4.47
Bluff City	do				1.30	.04			.40			.16			.70						.44		.26				.20	.70				.40	4.60
Byrdstown	Cumberland			.10				.65			.80												.22				.10				.30		2.17
Carthage	do				T.				.13	1.25													.01									T.	1.39
Cedar Hill	do							1.00			.30				T.				T.	.20		.70	.45	.05								.10	2.80
Celina	Cumberland				.39				.84		.56									.20			.35									.18	2.52
Center Point	Tennessee								.82										.20					1.25									2.27
Charleston	do	.25		.80	.10	.08			1.03		.30								.15		.04		T.				T.					.65	3.40
Chattanooga	do		.03	.01	.07			.03	.01	.17			.01							.16						.14	.01				.03	.42	1.09
Clarksville	Cumberland							.41		.22					.04					.01			.30										0.98
Clinton	Tennessee				.95			.03	.85		.30			T.							.85		T.	.10			.05					T.	3.13
Dandridge	do			1.12					1.10	.06									1.90						.30	1.00					.30	5.78
Decatur	do			.06	.34		.64	.80	.28		.46		.01					T.		.03		T.	T.			.37						.49	3.48
Dickson	Cumberland							.04	.15	.50						.66						.02	5.65	.30									7.32
Dover	do			T.				T.		T.										T.				.86								.30	1.16
Dunlap	Tennessee			.26	.07		.03		.32	.06	.08		.05							.37		.07				.05	.03			.09	4.15	5.63
Elizabethton	do				.84				1.07		T.			.26					.26	.27	.56	.08										T.	3.34
Erasmus	Cumberland			T.	.27			.08	.71	.21	.33									.25		.22				T.	T.	T.			.06	.59	2.72
Florence	do			T.	T.			T.	.10	.37									.33			.89								T.	.03	1.72
Franklin	do																																
Hall's Hill	do								.34		.55												.72										1.61
Harriman	Tennessee			.24	.08	T.		T.		T.	.30		T.			T.										.39						.19	1.20
Hohenwald	do							1.08	.45	.21			.05											.13								.68	2.60
Iron City	do							T.	.54	.12			T.						T.	.12		.12		.39							T.		1.29
Jefferson City	do		.63	.50				.95	.09		.02					.05				1.49						.37	.62				.17	.13	5.02
Johnson City	do			1.29	.19			1.18		.01	T.								.36	.54	T.	.04	.08			.03	.16				.73	.06	4.67
Johnsonville	do							T.		.02			T.							.01			.42	1.96			.22					T.	2.63
Jonesboro	do																																
Kingston	do			.01	.44						.17										.71						.10					.16	1.59
Knoxville	do			.39	.36		.90	.73	.03	.12						T.			T.	.45						.14	.04				.01	.69	3.86
Lebanon	Cumberland			T.				T.	.40	.79										.50		.19	.42				.15						2.45
Lewisburg	Tennessee			T.	T.			T.	.12	.08			T.		T.					.08		.70	.21								T.	.10	1.29
Livingston	Cumberland																																
Loudon	Tennessee			.03	.38		T.		.17		.23										.39		.13				.35					T.	1.68
Lynnville	do							T.	.53	.10			.04							T.		.52	.16								.03	.11	1.49
McGhee	do			.90	.30	.05	.10		.10		.20			.05			T.				1.00								T.			.05	2.75
McMinnville	Cumberland			.02	T.			.32	.03	.30	.08								T.	T.		T.	T.			.05	T.				T.	.14	0.94
Maryville	Tennessee		.77	.30	.79		.09		.18		.20					.04				1.01						.67					.02	.26	4.33
Mountain City	do		.33	.13	.62			.64	.36										.34	.35		.17	.12				.18					.50	3.74
Nashville	Cumberland			T.				.27	T.	.81					T.				.33	.20			.10	T.		.02					T.	T.	1.73
Newport	Tennessee							1.18											.60						.40						.25	.40	2.83
New River	Cumberland				.90				.30		.40											.20											1.80
Palmetto	Tennessee			T.	.02			.21	.02	.03			.07							.04		.36	.08									.20	1.03
Pinewood	do							T.	.29	.16						.26				T.		.02	3.00	.23			T.						3.96
Pope	do							.30			2.10							T.														T.	2.40
Rogersville	do			.86		T	T.	T.	.72		.18	.46		.14						.12	1.28			.04			.24	.68				.36	5.08
Rugby	Cumberland		T.	.25				.15	.04		.42								.10	.06		.39	.62			.05	.11				1.12	3.31
Savannah	Tennessee								T.														.15	.16									0.31
Sevierville	do			.86	.36			.48	.73		.04									.92						.30	.08				.08	.12	3.97
Sewanee	do																		.79									.55			.32		1.66
Sparta	Cumberland			T.	.73			T.	1.18						T.					T.	T.	T.				T.	T.				.05	.90	2.86
Springdale	Tennessee																																
Springville	do				.07			.07	T.	.04										.07				.21			.04					.36	0.86
Tazewell	do				.27				1.60		.28			.27		T.	.30			.52	.40						.24	T.				.20	4.08
Tullahoma	do				.32			.06	.04	.12	.12		.03		T.			.05		.18	.01	1.35	.15								.18	T.	2.61
Walling	Cumberland				.20				.80		.30			.20								1.10										.60	3.20
Waynesboro	Tennessee							.40		.12			.10					T.	.18	T.		.60	.37	.18			.03						1.98
Wildersville	Cumberland		T.					.30		.01									.04					.80									1.15
Worsham	do							.06		.52												.25										0.3	0.86
Yukon	do							.05	2.00	.35										.36		T.											2.76
Kentucky.																																	
Alpha	Cumberland			T.				1.10		.45										.05		T.	.40				T.				.40	T.	2.40
Anchorage	Ohio							.32		.02												.40					.76						1.51
Bardstown	Salt							T.	.40		1.13									.11		.74	2.00	T.			2.00						6.38
Beattyville	Kentucky				.30				.22		.26									.78		.72	.42				.54	.88				1.04	5.16
Beaverdam	Green				T.			T	1.10		T.									T.		T.					T.	.05					1.15
Berea	Kentucky		.01					.38												.40		1.20					1.60					2.50	6.09
Bowling Green	Green				T.				.10		.58					.02							.03				.25	.05					1.03
Burnside	Cumberland				.54				1.40		.40									.30			.44	.02				T.				.34	2.44
Cadiz	do							.12																								.04	0.16
Calhoun	Green			T.				.68		.11												2.65	.12			T.	.05						3.61
Catlettsburg	Big Sandy				.12				.04		1.40									.20							.16	.08				.06	2.06
Earlington	Green							.03			.15									.17			.35				T.	T.					0.70
Edmonton	do				.20			.52			.23									.19		.05		.12			.05				.31	.52	2.19
Eubank	Cumberland				.14				.50		.25									.09		.12	1.08				.15	.88				.80	4.01
Falmouth	Licking								.07		.57									.42		.44					.97						2.47
Farmers	do		.57	.14				.5			.56									.64		.52					.85					1.68	5.01
Frankfort	Kentucky								.16		.65									1.17		.24	.13				1.02						3.37
Franklin	Green		T.					T.		.40					.55					T.		T.	.18	T.								T.	1.13
Greensburg	do				.13				.30		.60									.08		.01	.33		.21			.02				.65	2.33
High Bridge	Kentucky								.25		.06									.30		.53	.65				1.40	.02				.10	3.31
Hopkinsville	Cumberland							.10															12		.12		.30	T.					0.64
Irvington	Ohio		.11					.36											.35			2.35					.97						4.14
Leitchfield	Green		.11					1.16														.50					.51						2.28
Lexington	Kentucky							.19		.21	.53								.17	.49		.97				1.35					.11	4.15
Loretto	Salt							.41											.11			1.60				1.05					.10	3.27
Louisville	Ohio							.31		T.									.02			1.51		T.		.32	.15						2.31
Marion	do		T.					T.		.46									T.				.43	T.	T.	T.							0.89
Maysville	do								.09		.14									1.16							.92	.02					2.33
Middlesboro	Cumberland		.08	.19				.68	.02		.38		.06		.02					.70							.11				.02	.21	2.47
Mount Sterling	Licking			.21					.03		.84									.25	T.	.14	T.				1.38	.16				.25	3.26
Owensboro	Ohio			.05				.15	.25		.10									.09			.45				.15						1.24
Owenton	Kentucky							.13		1.07										.08		.12											1.40
Paducah	Ohio				T.				.10		.08													.60	1.06		.36						2.20
Pikeville	Big Sandy				1.10				.32		.12									.52	T.		.22				.84	.06				.34	3.52
Richmond	Kentucky				.25				.35		.03									.78	.05	.38	.37				.87	.18				.42	3.68
St. John	Salt				.16				.35		.36									.04		1.22					1.01						3.14
Scott	Licking							.08	.01	.01	.03								.04			T.		T.		.81							0.97
Shelby City	Kentucky				.06			.21											.14	.23		2.17					.92				.01		3.74
Shelbyville	Salt								.25		.10									.13		.11	.53				.69						1.81
Taylorsville	do		T.					.30		T.	.30								.34	.42		1.72				1.44					T.	4.52
Williamsburg	Cumberland				.35				2.37		.41									T.	.07		T.					T.				.13	3.23
Williamstown	Licking								.13		.91									.16		.17					.50	.04					2.00

TABLE 2.—*Daily precipitation for August, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Indiana.																															
Anderson	West Fork, White							.08		.12							T.		.23					.03		.39	.05						0.90
Bloomington	do							.30	.14		.06									.41			T.		.05	.95						1.91
Bluffton	Wabash		.21					T.		.33	.05			T.			.02		.37		T.			.18		.19					T.	1.25
Butlerville	East Fork, White							.24		.06									T.			.63		.10			.83						1.86
Cambridge City	Whitewater								.09		.07									.02			T.		.02		.22						0.42
Columbus	East Fork, White							.12	.09		.07									.14						.03	.09						1.14
Connersville	Whitewater							.11		T.							T.		T.			.62		.08			.11	.19				T.	1.11
Delphi	Wabash		T.					T.	T.		.02						.02		.55	.06		.02	.30	1.02	.19	T.	.11						2.29
Eminence	West Fork, White							.25											1.30				.10										1.65
Evansville	Ohio			.19	T.			.37		.06							T.					.09	.01			.19	.05					T.	0.96
Farmersburg	Wabash							.35		.05							.34							.05		.26							1.05
Farmland	West Fork, White								.05		.13									.22			T.	T.			.57						0.97
Greenfield	East Fork, White							.18		.11									.10			T.				.20	.41						1.00
Greensburg	do							.13		.15							T.		T.							.20	.49						0.97
Huntingburg	Wabash							.32														1.71					.80						2.83
Huntington	do									.02	.35				.50			.32	1.20					1.20		.60	.02					.05	4.26
Indianapolis	West Fork, White							.18		.04							T.		1.20			T.		T.		1.32						.01	2.75
Jeffersonville	Ohio							.28		.05									T.	T.		.79				.31							1.43
Judyville	Wabash							.14		T.							.30	.70	.11		T.			.86	.01	.25							2.37
Kokomo	do							T.		T.							.03		1.09		T.	T.		1.29		.10							2.51
Lafayette	do							.12	.01		T.					.40	.09		.06	.20				1.10	.16	T.	.35	.01					2.50
Logansport	do																.04		.38	.33				1.65	.23		.02						2.65
Madison	Ohio							.10		.03										.15		.56					.22						1.06
Marengo	do							.21		.11												.16					T.					.06	0.54
Marion	Wabash		T.								.05							.01	.08	.88				.25	.32		.35						1.94
Markle	do									.10	.10				.10		.40		.50		T.	T.		.80		.70					T.	3.70
Mauzy	East Fork, White							.16		.07							T.		.02			.90		.05		.35	.11				2.47	4.13
Monticello	Wabash							.31										.06	.06		.09			1.27		.02				T.			1.81
Moores Hill	Ohio							.08		.22												.03		.03			1.06						1.42
Mount Vernon	do				.06			.50	.08											.08			.70			.14	.22						1.64
Paoli	East Fork, White			.03				.24		.05									.11			.13	.01				.10						0.67
Princeton	Wabash							.30		.15												.86				.30							1.61
Richmond	Whitewater							.12		.06									.01					T.		.50						.12	0.81
Rochester	Wabash	T.						.04		.01							.21		.10			.56		1.56	T.	.17						.86	3.51
Rockville	do							.23		.03	T.						.22		.23		T.			.48		1.10							2.29
Rome	Ohio			.05				.26		.02	.06											.82	.02			T.	1.23	.01			T.		2.47
Salamonia	Wabash		.04							.27	T.						.09		1.06					.02		.14	.28						1.90
Salem	Ohio			T.				.20		.10									.18			.26		.23		T.	.06						1.03
Scottsburg	East Fork, White							.11		.08									.15	T.		2.02					.18						2.54
Seymour	do							.20		.05									1.12	.05		.02		.02			.80						2.27
Shelbyville	do							.20		.10									T.			.30			.30	T.	.10					1.00	2.00
Terre Haute	Wabash							.48		.08							.58		.58	.02						.52	T.						2.26
Veedersburg	do							.12	.04	.11							1.81		.22			.01		.55		.22							3.08
Vevay	Ohio							.15		.15												T.				.20							0.50
Vincennes	Wabash				.10			.15	.10		.10								.25		T.		T.		T.		.35						1.05
Washington	West Fork, White							.15	.03		.05								.04		.40		.93										1.60
Whitestown	do																																
Winona Lake	Wabash							T.		.04							T.	.29	.14		T.			1.00		.14						.87	2.48
Worthington	West Fork, White							.35		.09							.03		.02					.06		.82	.03						1.40
Illinois.																															
Albion	Wabash			.03				.25		.18							.03		1.23			.65	.30			.86							3.53
Charleston	do							.40		.03							.32	.01	1.15					.12		1.72							3.75
Danville	do							.11		T.							1.07	.28	.14		T.			.49	T.	.03					T.		2.12
Equality	Ohio			T.				1.04		.10								T.	T.			T.	2.18	.02		.38	.20					.02	3.94
Fairfield	Wabash			.02				.26														.02		.06		1.18							1.54
Flora	do			T.				.66		T.	.05						.20	T.	T.			T.	T.	.14		.55							1.60
Golconda	Ohio			.17				.21		.13												T.	1.61	.73		T.	.73						3.58
Hooperston	Wabash							.09		T.					.02	.34	.46		.06			.01		1.16		.03						.06	2.23
McLeansboro	Ohio							.07			.38												1.78				.34						2.57
Martinsville	Wabash							.43		T.							.75	T.	.66					.30		.50						.25	2.89
Mt. Carmel	do				T.			.24	T.		.20									.90		T.	1.00				.30						3.14
New Burnside	Ohio				.09			.50			.06													1.22		T.							1.81
Olney	Wabash		.02					.32		.02							.27	.03				.91		.27		.25							2.10
Palestine	do							.07		.08								.04	.04					.06		.30							0.59
Paris	do							.20									.73			T.			.15				.55						1.63
Philo	do							.23		T.							.83		.06			.43		.63		T.					T.		2.18
Rantoul	do							.21			T.						.26			.15		.10		.43			T.					.98	2.13
Robinson	do						.45	T.									.77	T.								.43							1.65
Sumner	do			T.				.31		.06							.21		.13			.37		.15		.42							1.65
Tuscola	do							.25		T.							.65			.13			.09		.23		.07						1.42
Urbana	do							.22		T.							.85	.50	.10					.87		T.	.08						2.62

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.																Ohio.							
	Greenville.		Pittsburg.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.‡‡		Morgantown.		Parkersburg.		Wheeling.‡‡		Canton.‡‡		Cincinnati.		Columbus.		Dayton.‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	84	42	79	54	84	60	84	55	81	51	89	56	86	61	81	54	85	60	89	54	83	47	85	62	84	62	86	54
2...	85	51	83	64	87	64	86	58	83	54	88	58	89	62	85	55	86	60	84	56	87	60	89	63	86	65	90	59
3...	90	57	89	68	91	68	86	60	90	59	95	61	93	63	91	58	93	64	95	61	90	63	91	66	91	69	94	65
4...	87	67	85	70	86	69	82	62	81	64	89	67	86	68	86	69	86	68	89	61	81	69	86	71	83	65	87	69
5...	76	48	78	60	84	63	82	57	76	58	85	57	83	60	79	59	82	62	86	54	78	52	82	61	81	57	85	53
6...	81	48	80	59	82	62	79	55	80	54	88	54	84	61	80	57	84	61	91	52	82	51	85	61	84	58	88	52
7...	78	46	78	57	82	62	84	59	82	48	84	53	80	58	83	54	79	57	82	54	75	52	71	62	73	63	72	60
8...	79	45	79	62	81	66	78	55	76	57	86	65	85	65	80	60	83	64	89	58	81	58	86	65	84	63	86	60
9...	87	35	85	58	87	62	83	53	83	52	90	53	89	60	85	55	88	58	90	55	86	52	83	62	85	62	86	58
10...	84	54	81	66	87	66	82	62	79	58	86	67	85	63	80	64	84	66	87	56	76	63	82	67	83	65	86	65
11...	81	47	82	61	84	65	82	52	81	53	87	57	85	60	82	60	82	60	89	59	79	54	84	64	82	60	85	54
12...	84	38	84	61	85	62	85	54	82	53	91	56	86	60	85	57	87	62	90	56	82	51	83	64	84	56	88	51
13...	89	44	86	67	88	60	80	55	83	52	92	57	88	59	82	60	89	60	93	59	87	55	90	61	89	62	92	54
14...	93	72	90	68	87	63	82	53	83	57	91	58	88	61	90	61	88	61	93	58	90	57	90	65	92	66	94	61
15...	93	47	88	70	89	64	84	54	86	52	93	57	90	63	87	61	88	64	94	62	89	61	91	65	94	67	94	58
16...	91	48	89	69	90	64	87	57	86	57	94	57	90	63	88	61	91	61	95	61	86	60	90	68	93	69	93	61
17...	89	55	84	70	92	66	86	60	81	56	97	59	92	66	83	68	92	70	96	62	90	67	93	69	92	70	96	62
18...	83	56	87	68	90	60	88	63	89	62	95	61	92	67	90	65	91	70	92	64	80	65	91	70	87	69	89	66
19...	82	56	78	64	90	63	86	65	79	53	87	70	82	70	81	65	80	66	87	65	78	58	83	68	81	60	86	63
20...	82	39	79	54	83	57	78	54	78	49	88	50	82	55	79	50	80	53	87	49	81	45	85	62	81	59	84	51
21...	88	42	83	58	84	57	87	56	84	49	90	50	85	52	85	56	86	55	92	50	87	56	83	67	87	61	89	58
22...	87	55	83	65	84	62	84	57	80	56	88	65	85	59	84	60	84	60	85	57	81	59	86	63	83	62	86	59
23...	86	58	84	68	85	66	80	55	82	57	90	58	86	62	79	61	86	65	86	60	83	63	86	69	83	67	85	64
24...	.....	.....	83	70	88	65	80	58	86	56	89	59	88	62	84	69	85	65	85	63	84	67	90	68	88	68	91	69
25...	89	62	85	69	88	65	83	60	83	56	88	58	88	65	84	66	86	68	88	62	84	67	86	62	85	58	88	70
26...	79	48	78	57	86	61	81	59	72	49	82	59	70	59	79	56	77	57	79	58	67	52	72	57	71	53	74	52
27...	77	36	75	49	77	53	77	51	79	47	84	47	80	49	79	48	78	51	81	47	76	41	76	54	76	51	80	43
28...	84	42	82	56	87	59	80	53	85	51	90	50	87	50	78	56	86	54	88	49	81	46	84	55	84	52	89	40
29...	86	49	84	60	90	59	82	55	86	54	93	53	90	59	86	61	88	62	90	51	81	53	86	61	88	57	91	52
30...	86	56	85	65	88	63	80	62	78	56	96	55	92	61	85	66	92	65	92	56	88	61	91	64	90	65	96	57
31...	88	65	79	67	85	69	75	63	76	58	82	60	78	65	78	65	75	66	79	61	82	67	82	70	79	68	90	66
Mns	84.9[a]	50.3[a]	82.7	63.0	86.2	62.7	82.4	57.2	81.6	54.5	89.3	57.6	85.9	60.9	83.2	60.0	85.2	61.8	88.5	57.1	82.1	57.2	85.2	64.1	84.6	62.2	87.7	58.3

Date.	Ohio.				Virginia.				Asheville, N. C.		Decatur, Ala.‡‡		Tennessee.														Beattyville, Ky.‡‡	
	Marion.		Waverly.‡‡		Big Stone Gap.		Wytheville.						Chattanooga.		Jonesboro.		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynesboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	88	52	88	56	83	58	78	56	83	60	86	61	86	64	.....	.....	87	64	84	62	84	56	83	70	81	56	88	56
2...	88	63	88	59	85	62	88	58	83	64	94	61	89	69	.....	.....	90	67	88	62	90	57	87	65	88	56	88	57
3...	93	64	94	63	81	58	86	61	84	65	96	64	89	71	.....	.....	88	70	89	70	89	70	91	58	88	68	89	67
4...	82	69	87	66	82	68	79	64	83	65	94	73	88	69	.....	.....	87	70	89	73	88	72	89	69	87	71	88	68
5...	83	48	86	54	80	62	79	60	82	64	92	72	88	67	.....	.....	85	68	87	67	89	64	90	66	86	70	86	58
6...	88	47	85	52	81	59	80	56	80	58	89	70	85	71	.....	.....	87	67	88	64	91	62	90	65	88	68	83	57
7...	78	52	89	54	79	68	79	57	80	65	93	70	83	72	.....	.....	84	70	85	70	88	69	88	69	88	69	84	57
8...	88	58	89	62	77	68	77	60	76	63	87	73	82	68	.....	.....	80	68	81	68	83	69	83	70	80	68	84	63
9...	87	63	90	55	81	57	82	54	83	57	93	66	88	63	.....	.....	86	62	88	62	87	60	85	70	88	69	88	59
10...	85	62	84	64	80	64	79	60	79	64	89	66	86	68	.....	.....	84	67	84	66	89	66	90	62	86	66	86	61
11...	85	53	86	55	80	57	81	55	79	58	88	69	85	64	.....	.....	82	63	84	63	87	59	90	61	86	64	85	55
12...	89	49	88	57	83	58	81	55	80	59	92	68	83	68	.....	.....	83	65	85	63	89	63	89	60	88	63	87	55
13...	94	54	92	56	80	58	74	55	77	54	94	64	86	65	.....	.....	84	64	88	65	91	59	90	60	90	58	89	56
14...	96	60	93	58	81	56	79	57	77	55	90	68	86	65	.....	.....	84	63	89	68	89	63	85	62	89	62	88	58
15...	98	59	95	59	82	57	80	56	80	59	92	68	88	64	.....	.....	87	64	90	66	93	62	91	63	98	61	92	59
16...	93	63	96	61	84	61	85	57	83	62	96	68	90	67	.....	.....	88	64	90	65	96	62	90	63	92	63	91	62
17...	96	63	93	63	85	64	82	60	83	63	96	67	92	69	.....	.....	90	68	91	68	97	63	92	66	95	68	93	66
18...	85	69	94	65	85	63	85	62	85	66	96	68	91	69	.....	.....	90	69	94	72	98	65	92	67	94	66	94	64
19...	85	55	86	67	78	66	78	63	77	63	97	71	89	70	.....	.....	78	69	84	73	91	70	91	69	84	66	86	67
20...	80	50	86	49	81	62	81	56	84	60	90	70	86	67	.....	.....	84	67	88	70	91	64	92	66	90	63	86	59
21...	94	56	90	54	76	58	78	58	81	61	95	69	89	68	.....	.....	81	66	92	70	94	65	92	65	90	64	72	60
22...	85	58	88	56	77	63	77	59	78	57	95	68	85	69	.....	.....	83	66	82	69	84	67	90	64	83	64	86	59
23...	86	66	87	62	79	60	80	55	78	55	86	67	85	65	.....	.....	84	61	82	71	85	67	87	63	81	70	85	59
24...	93	67	87	64	80	61	78	60	76	58	87	65	83	66	.....	.....	86	63	87	66	88	63	88	60	86	66	87	59
25...	86	67	87	63	81	62	80	65	77	64	88	65	84	70	.....	.....	85	67	86	70	86	69	90	66	85	67	88	60
26...	81	48	74	56	76	63	72	64	82	63	88	69	84	66	.....	.....	80	65	75	64	79	66	77	67	76	63	67	56
27...	83	42	80	45	81	60	76	57	78	62	89	64	88	64	.....	.....	87	65	80	59	87	62	89	61	84	60	80	48
28...	89	44	88	47	82	63	79	60	83	64	95	67	90	67	.....	.....	87	66	89	62	93	63	90	61	89	62	91	54
29...	90	57	90	54	83	60	75	59	78	57	93	67	89	68	.....	.....	87	66	92	67	95	67	92	63	92	63	87	56
30...	96	59	95	57	83	63	70	64	73	66	90	68	87	69	.....	.....	82	69	91	69	93	66	84	63	90	63	90	57
31...	92	67	73	61	80	68	70	62	80	65	95	67	84	71	.....	.....	80	70	86	70	92	66	84	70	90	68	78	61
Mns	88.3	57.4	88.0	57.9	80.8	61.5	79.0	58.7	80.1	61.2	91.8	67.5	86.8	67.5	.....	.....	84.8	66.2	86.7	66.9	89.5	64.4	88.4	64.6	87.2	64.9	86.0	59.1

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 3*—Continued.

Date.	Kentucky.														Indiana.												Pullo, Ill.	
	Bowling Green. ‡‡		Earlington. ‡‡		Greensburg. ‡‡		Lexington.		Louisville.		Maysville. ‡‡		Williamsburg. ‡‡		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	89	57	90	58	83	52	80	61	84	61	87	58	87	66	86	52	86	64	84	58	85	50	83	55	84	57	85	55
2...	89	58	89	57	88	54	85	62	89	64	92	59	91	58	88	60	83	69	88	66	88	67	86	66	87	63	88	66
3...	93	62	87	63	88	58	86	67	90	68	94	62	90	62	89	63	83	70	85	68	87	60	83	66	86	65	86	60
4...	90	70	92	68	87	65	82	67	87	71	88	65	89	69	88	66	87	70	83	67	81	60	81	65	84	67	84	61
5...	91	61	89	58	85	58	81	62	86	65	86	58	86	61	86	55	84	64	80	59	80	48	79	55	82	52	83	48
6...	87	60	88	58	85	54	80	64	82	65	88	58	87	59	87	53	83	65	83	61	87	47	82	56	84	57	85	49
7...	88	62	85	63	80	57	74	62	76	65	74	58	86	66	78	60	78	64	70	63	76	60	75	63	75	63	71	63
8...	88	63	88	62	81	61	80	62	84	64	87	62	81	64	86	58	82	60	82	60	84	53	81	55	81	55	84	57
9...	90	60	90	62	86	58	82	62	85	64	90	57	89	60	81	61	81	67	74	64	76	62	75	62	76	61	79	62
10...	89	64	88	65	82	59	79	65	83	67	86	59	84	63	84	64	83	66	81	62	82	68	80	58	79	60	84	52
11...	87	62	89	55	82	56	80	63	83	62	87	56	84	58	85	55	82	63	83	62	82	51	80	58	81	57	85	52
12...	87	60	91	58	84	56	81	62	84	65	89	55	85	59	86	54	85	66	84	61	89	50	84	56	84	57	87	51
13...	93	60	94	56	88	56	85	62	92	63	92	57	87	58	92	53	88	63	86	61	90	48	83	59	87	55	86	51
14...	94	63	96	61	89	58	86	66	92	68	93	60	88	59	90	63	90	71	89	66	91	69	87	61	89	65	89	57
15...	93	62	97	64	89	59	88	68	92	68	93	62	89	61	92	61	90	71	90	70	95	65	88	67	90	64	92	66
16...	95	60	98	64	91	59	87	71	91	68	94	62	91	64	90	60	91	73	87	70	92	65	86	68	87	67	89	68
17...	95	62	99	67	92	61	91	72	94	71	95	64	95	65	93	64	93	73	90	72	94	65	88	69	92	68	90	67
18...	96	62	97	68	94	63	89	70	93	73	93	65	92	67	92	67	93	74	77	68	80	67	81	70	86	72	76	69
19...	90	71	89	70	84	67	80	67	84	70	85	68	87	67	86	66	83	71	80	66	81	60	80	65	84	68	81	60
20...	95	65	96	65	90	58	83	60	88	62	85	55	87	65	87	59	90	67	83	62	84	55	82	61	86	57	84	58
21...	87	67	94	70	75	60	71	63	76	65	84	56	84	64	79	63	87	69	81	66	86	63	85	67	87	67	87	64
22...	88	62	91	65	83	60	81	64	85	63	87	58	86	63	85	61	86	66	82	63	83	63	83	63	85	62	87	63
23...	89	65	85	70	78	62	81	66	84	69	86	65	88	61	83	67	83	73	85	65	86	62	83	63	86	67	84	64
24...	91	63	94	72	87	59	82	66	87	68	89	64	71	60	88	68	88	72	85	69	83	70	83	71	86	71	84	72
25...	91	65	89	71	87	61	83	61	87	64	89	65	88	58	85	69	84	64	78	59	80	62	79	63	82	66	81	58
26...	76	60	76	60	68	57	64	56	73	59	75	59	76	66	79	55	71	58	71	54	72	42	69	48	71	52	70	44
27...	85	52	84	49	77	48	73	51	77	53	81	47	87	59	78	46	77	54	75	53	77	44	74	50	76	48	75	44
28...	93	57	92	50	90	52	83	57	87	57	86	50	89	60	86	49	85	57	81	54	83	45	79	51	81	49	80	45
29...	95	59	97	58	88	55	84	61	90	61	93	55	90	61	90	55	89	62	84	58	86	51	83	58	86	54	84	50
30...	95	63	98	60	90	57	87	66	90	65	96	56	88	60	93	59	91	66	87	63	91	60	88	62	89	60	91	60
31...	92	68	96	65	78	59	73	68	85	69	74	62	83	64	90	65	91	68	86	67	79	58	83	67	88	63	78	67
Mns	90.4	62.1	91.2	62.3	84.8	58.0	81.4	63.7	85.8	65.1	87.7	59.3	86.6	62.2	86.5	59.7	85.4	66.5	82.4	63.1	84.2	57.7	81.7	61.2	83.9	60.7	83.5	58.2

Climatological Data for August, 1910.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX, District Editor.
D. CUTHBERTSON, Forecast Official, temporarily in charge.

GENERAL SUMMARY.

The month of August, 1910, in the Lake region was marked by fairly even temperature conditions, and by irregular distribution of rainfall. The amount of sunshine was above the average in most portions of the district, and it was especially abundant in the sections south of the Lake region, where the precipitation was decidedly deficient. As a rule, the streams and rivers were low, but those draining the basin of Lake Michigan received quite heavy rainfalls after the middle of the month and began to rise slowly. In the extreme eastern sections low water continued throughout the entire period and in some instances springs were reported to be failing. Low readings were marked by the Lake Champlain gage during the latter half of August, the levels being only slightly higher than that of the same period last year, and less than 1.5 foot above the low-water mark of 1888. The difficulties of using stream flow for power, noted last month, spread to other sections, as shown by the following extract from the Montpelier Daily Journal in its issue of August 26:

> The lack of rain is inconveniencing the manufacturing firms along various rivers, who depend upon water power to turn their wheels. Some of them state that unless there is rain within a short time they will be obliged to resort to steam.

The main features of meteorological interest during the month are summarized in the table below, which presents the mean values for such portions of the various States as are included in Climatological District No. 4:

Portions of States lying within District No. 4.	Mean. Temperature.	Departure from normal.	Precipitation.	Departure from normal.	Snowfall.	Number of days. .01 inch or more precipitation.	Clear.	Partly cloudy.	Cloudy.	Prevailing wind direction.
Minnesota	62.1	− 0.6	1.72	− 1.93	0	8	10	14	7	ne.
Wisconsin	68.2	+ 1.2	3.65	+ 0.46	0	8	13	11	7	sw.
Illinois	73.3	+ 2.1	3.08	+ 0.20	0	6	10	15	6	s.
Indiana	71.3	− 0.8	3.16	+ 0.50	0	8	16	8	7	w.
Upper Michigan	62.5	0.0	3.44	+ 0.51	0	8	13	8	10	w.
Lower Michigan	68.1	+ 0.3	2.96	+ 0.23	0	7	13	10	8	sw.
Ohio	71.1	+ 0.4	1.82	− 1.04	0	6	18	8	5	sw.
Pennsylvania	70.0	+ 0.6	1.76	− 1.33	0	9	14	13	4	s.
New York	66.4	+ 0.1	3.50	+ 0.11	T.	9	15	10	6	s.
Vermont	64.8	− 0.8	4.04	− 0.25	0	10	11	11	9	s.

TEMPERATURE.

Except along the western shores of Lake Michigan and Lake Superior, the mean monthly temperatures did not exceed the normal by more than 1° in any portion of the district. Generally, in the extreme southwestern portion, the Lower Michigan Peninsula, and the region lying to the south of the lower Lakes, temperatures somewhat in excess of their respective normals were experienced. In Upper Michigan the mean temperature was the same as the seasonal average, while in the western Superior region, the Lake Champlain Basin, and in northern Indiana there was a slight deficiency in temperature.

As was the case with the monthly mean temperatures, the daily values kept within a comparatively small range. At no station in the entire district did the daily mean exceed its normal by more than 13° nor fall below it by more than 12°. There were, therefore, no pronounced periods of heat or cold; and as there were only a few temperature changes of marked degree, the conditions throughout the month were generally pleasant and comfortable.

The first few days of the month were marked by moderate temperatures in practically all portions of the district, although in New York State a number of stations experienced the maximum heat of the period on the 3d. These were followed by somewhat cooler weather from the 4th to the 7th, inclusive, during which time a few scattered stations in Upper and Lower Michigan recorded their lowest readings. At the majority of stations, however, the minimums did not occur until the closing days of the month. From the 7th to the 11th nearly normal conditions again prevailed. From the 12th to the 17th the temperature was above normal, and it was during this time that the maximum heat of the month occurred generally over the Indiana and Ohio portions of the district, as well as at many stations in the Michigan peninsulas and in localities of Vermont. In nearly all other sections of the district the highest temperatures occurred during the warm period of the 20–25th, which accompanied the advance of a storm area of considerable magnitude in its passage across the Lake region.

This storm was followed by sharp, although not exceptional, falls in temperature, the cool period of the 25–27th being generally the severest of the month. Cool weather continued in the extreme eastern sections until the 31st. Frosts were reported from scattered localities in Wisconsin on the 26th. In New York light to killing frosts occurred at several stations during this time: At Keene Valley on the 30th; at Lake Placid Club on the 12th, 20th, and 30th; at Nehasane on the 27th; at Tupper Lake on the 27th and 30th; and at Wedgewood on the 27th. Frosts also occurred on the mornings of the 27th and 30th in exposed localities of the Vermont portion of the district, mostly at the foot of ravines leading from the mountain ranges. Very little damage was done to staple crops, it being confined chiefly to tender vines.

PRECIPITATION.

In the Lake Michigan Basin, and in that portion of New York State lying within the district, precipitation fell in excess of the normal; but elsewhere there was a deficiency, the lack of moisture being quite pronounced over northern Ohio, northeastern Indiana, and the region of western Lake Superior, where drought conditions continued from the previous summer months. The following extracts from the reports of Weather Bureau officials set forth the extreme dryness which has prevailed in these sections during the present season:

Minnesota.—The growing season (counting from March 1 to August 31) of 1910 has been the driest in 40 years. In this connection the data below may be of interest:

	Precipitation. Actual 1910.	Normal.
	Inches.	*Inches.*
March	0.44	1.55
April	1.40	2.14
May	1.18	3.47
Spring totals	3.02	7.16
June	0.11	4.53
July	3.89	3.65
August	2.41	3.53
Summer totals	6.41	11.71
Seasonal totals	9.43	18.87

There have been drier springs and drier summers, but the deficiency did not continue throughout the whole season. The previous low record of rainfall for dry growing seasons, spring and summer combined, is 11.25 inches, in 1883.—*H. W. Richardson, Local Forecaster, Duluth.*

Ohio.—This was one of the driest Augusts on record. The average amount of rainfall for this portion of the district was more than 1 inch below the normal, and at only 3 stations was there an excess. There were fewer rainy days than usual for August, and the rains that did occur were generally only light showers.

While the lack of moisture was general, it was especially severe in the middle counties, where the rainfall was light in June and July also. At Cleveland the total for the 3 summer months was only 4.03 inches, the lowest recorded in 40 years. At Hiram, Portage County, the total for the 3 months was but 4.22 inches, the lowest on record at that station. At Bucyrus the 3 months fall was 5.59 inches; Medina, 4.90 inches; Oberlin, 4.66 inches; Wellington, 5.06 inches; and Willoughby, 4.56 inches. These stations have, however, received less amounts in other years, and the summers of 1886, 1893, and 1894 were very dry.—*J. Warren Smith, Local Forecaster, Columbus.*

In the Lake Michigan Basin, and in the central portion of Upper Michigan, the amount of precipitation was considerably in excess of the normal. Although there was a fairly good distribution of rainfall over this section after the middle of the month, yet the greater portion of the amount received fell during the 22d–26th, when 24-hour falls of from 1 inch to 3 inches were general. In New York State the precipitation was slightly above the normal, and was exceptionally well distributed both in regard to locality and time of occurrence. In the Lake Champlain Basin the rainfall was confined chiefly to the first 11 days of the month, with the exception of the 8th and 9th, and the amounts ranged from 2.57 inches at Northfield to 5.03 inches at Wells, in Rutland County. The rainfall in this section was sufficient for the needs of vegetation generally, although it had no appreciable effect in raising the brooks and stream levels.

Snow was recorded at but one station in the district, the amount being only a trace, which fell at Blue Mountain Lake, N. Y., on the morning of the 5th.

LOCAL STORMS.

During the passage of the disturbance of the 20–25th, referred to in the discussion of temperature conditions, a number of local storms swept the region lying around the northern end of Lake Michigan, causing considerable damage locally. The following extracts relative to the severest of these storms are from the reports of Weather Bureau officials:

Escanaba.—The storm on the afternoon of the 22d was severe, with very heavy thunder from 4 to 6 p.m. The clouds were very threatening at 4 p.m., so much so that a tornado was feared. It became so dark at 4:15 p. m. that one could not read the time from a watch without artificial light. Although this was more than 2 hours before sunset, yet stores and dwellings had to be lighted up as if it were night. The precipitation was excessive from 4:11 p. m. to 5:37 p. m., during which time 1.86 inch fell. Streets and basements were flooded, 2 buildings were struck by lightning, and a great deal of damage was done to telegraph, telephone, and electric light lines.

Houghton.—A hailstorm occurred on the 24th. The ground was completely covered by the hailstones, which were about ¼ inch in diameter. No serious damage, however, resulted.

Sault Ste. Marie.—The worst hailstorm on record at this station occurred on Sunday, August 21. Hailstones, some of them larger than walnuts, fell in large quantities, and were accompanied by heavy rain. Many panes of glass in hothouse windows and skylights were broken, and some damage to other light structures was reported.

Scottsville, Mich.—A destructive storm, which was apparently a true tornado, occurred at Scottsville, Mason County, Mich., at about 9 a. m., August 25. The storm exhibited a pendant funnel-shaped cloud with rotary winds. Apparently the tornado pursued, for a short distance, an unusual course from northwest to southeast, but soon recurved and moved in the usual northeasterly direction. The path of greatest destruction was from 50 to 100 feet in width. On the north side of this track prostrated trees fell toward the south, in the center toward the southeast, and on the south side, toward the northwest. The path of the storm was several miles in length, during the course of which a number of buildings were moved from their foundations or unroofed. At one point a partially completed cement block house was leveled to the ground. No lives were lost, and only 2 persons were injured, neither seriously. The estimated damage is $5,000.

On the night of the 22–23d numerous severe thunderstorms occurred over northern and central Michigan, especially in the vicinity of the western shore. Newspaper reports from Boyne, Ludington, Ada, Middleville, Reed City, Coopersville, Muskegon, Saginaw, Jackson, Whitehall, Holland, and Vicksburg show the damage resulting from lightning discharges to have been considerable; and there were undountedly other localities affected from which no reports were secured.

MISCELLANEOUS.

Smoke and haze, evidently brought by the upper air currents from the forest fires of the northern Rockies, were observed at various stations of the district during the latter portion of the month. The smoky conditions were most pronounced from the 22d to the 25th. As observed at Duluth and Marquette the smoke had a distinct yellowish color, the light from which was reflected to the earth, giving a vivid green appearance to all vegetation. At these two stations the smoke cut off so much of the sun's illumination as to render the use of artificial light necessary on the 22d, and at the former on the 23d as well. At Canton, N. Y., the haze of the 23d–25th was so dense as to obscure the sun for more than one hour after rising and before setting.

Dense fog occurred on the 3d over the Detroit River, and on the 12th and 20th over southern Lake Huron. These fogs interfered somewhat with navigation, and a few vessels were reported to have grounded while endeavoring to work through them.

Auroras were observed at Milwaukee, Wis., on the night of the 9–10th, and at Burlington, Vt., on the 21st and 28th.

TABLE 1.—*Climatological data for August, 1910. District No. 4, Lake Region.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Duluth	St. Louis	1,133	39	62.8	− 1.7	85	20	44	31	29	2.41	− 1.04	1.71	0.0	10	10	11	10	ne.	U. S. Weather Bureau.
Floodwood	do	1,257	6																	M. H. Schussler.
Mount Iron	do	1,510	16	61.6	− 0.7	89	20	29	26	45	1.04	− 2.95	0.35	0.0	5	8	13	10	nw.	Oliver Iron Mining Co.
Stephens Mine	do	1,500	3	60.1		88	20	29	26	45	1.45		0.67	0.0	8	10	15	6	sw.	Do.
Two Harbors	Lake	614	16	64.0	+ 0.7	85	16†	40	31	35	2.00	− 1.80	0.50	0.0	8	10	17	4	ne.	George W. Watts.
Virginia	St. Louis	1,434	16																	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	11	71.5	+ 3.6	93	22	47	26	33	4.10	+ 1.75	1.45	0.0	10	18	7	6	s.	Wm. O. Thiede.
Ashland	Ashland	647	16	64.0	− 3.1	91	21	43	26†	47	1.87	− 1.27	0.83	0.0	9	15	13	3	ne.	Sam Wheeler.
Bayfield	Bayfield	635	2	66.5		86	20	49	30	27	1.44		0.65	0.0	6	19	7	5	nc.	Ruben V. Ryder.
Cecil	Shawano	804	3	67.0		92	22	43	31	40	4.53		0.95	0.0	10	10	17	4	sw.	Louis W. Schmidt.
Chilton	Calumet	860	16	69.6	+ 1.4	92	22	48	26†	37	3.46	+ 0.65	1.50	0.0	9	10	13	2	sw.	Daniel V. Jones.
Crandon	Forest	1,060	15	65.0[d]	+ 1.4	96	18	41	31	35	2.63	+ 0.03	1.10	0.0	4	20[d]	4[d]	3[d]	s.	Calvin T. H. Riggs.
Florence	Florence	1,293	19	63.3[b]	− 0.1	86	16	39	26	34[j]	2.75	− 0.45	0.89	0.0	4	12	10	9	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	24	70.6	+ 2.9	93	22†	43	26†	41	4.22	+ 1.08	1.70	0.0	9	19	4	8	sw.	Geo. W. Marshall.
Grand River Locks	Marquette	770	14	70.3		93	12	39	6†	51	4.18	+ 0.20	1.18	0.0	7	22	2	7	sw.	Jerry Parkinson.
Green Bay	Brown	617	24	68.8	+ 1.8	92	22	46	26	29	6.08	+ 2.98	2.81	0.0	12	3	11	17	se.	U. S. Weather Bureau.
Iron River	Bayfield	1,096	1	65.8		88	21†	42	26	36	2.08		0.60	0.0	9	15	10	6	sw.	Harry C. Hall.
Kewaunee	Kewaunee	590	1	66.7		88	3	46	26	28	4.65		1.80	0.0	9	8	13	10	s.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	59	67.9	+ 1.4	92	3	48	26	30	3.17	+ 0.18	1.24	0.0	9	14	8	9	sw.	Johanna Lups.
Menasha	Winnebago	764	13								3.53	+ 1.22	1.42	0.0	7	23	4	4	se.	George T. Allanson.
Menominee Falls	Waukesha	842	1	70.2		93	22	44	26	35	3.43		0.98	0.0	7	18	7	6	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	70.6	+ 1.9	89	24	51	26	26	2.75	− 0.07	0.84	0.0	12	11	11	9	w.	U. S. Weather Bureau.
New London	Outagamie	762	14	70.4	+ 2.4	95	22	42	26	39	2.78	− 0.19	0.97	0.0	7	9	15	7	sw.	August H. Pape.
Oconto	Oconto	590	19	68.2	+ 0.9	90	12	44	26	35	5.98	+ 3.48	2.65	0.0	11	12	13	6	se.	William K. Smith.
Oshkosh	Winnebago	744	21	70.4	+ 1.6	92	22†	44	26	38	3.31	+ 0.47	1.50	0.0	8	15	15	1	sw.	Evan Vincent.
Pine River	Waushara	900	15	70.2	+ 2.1	91	22	43	26	37	1.63	− 1.35	0.58	0.0	9	8	19	4	nw.	George H. Carpenter.
Plum Island	Door	588	2	66.6		78	22†	51	19	22	7.76		5.37	0.0	7	6	13	12	s.	John P. Whelan.
Plymouth‡	Sheboygan	843		69.6		91	22	47	26	33	4.02		1.27	0.0	9	10	12	9	nw.	Paul O. Feldrappe.
Port Washington	Ozaukee	713	17	68.7	+ 0.9	87	3	48	26	30	3.03	− 0.01	0.66	0.0	7	15	6	10	se.	Richard C. Kann.
Racine	Racine	633	13	71.3	+ 0.7	91	8	44	26	33	2.24	− 0.80	1.03	0.0	9	12	12	7	ne.	Daniel Davis.
Ripon	Fond du Lac	935																		Ripon College.
Sheboygan	Sheboygan	831	12	69.6	+ 0.6	88	13	49	26	30	4.93	+ 2.04	1.65	0.0	9	13	11	7	se.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	66.0	− 0.2	85	3	47	11	27	7.01		4.57	0.0	8	13	12	6	s.	Adam N. Dier.
Superior	Douglas	671	1	64.3		86	20	44	31	33	1.87		0.92	0.0	6	11	15	5	ne.	Edward B. Banks.
Waupaca	Waupaca	857	14	69.0	+ 0.9	92	22	43	26†	44	2.66	− 0.59	0.66	0.0	12	8	7	16	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	40	73.3	+ 2.1	89	22	53	26	23	3.08	+ 0.20	1.81	0.0	6	10	15	6	s.	U. S. Weather Bureau.
Indiana.																				
Auburn	DeKalb	874	14	65.8	− 4.5	87	17	41	27	38	4.11	+ 0.89	2.56	0.0	9	21	4	6	w.	Mrs. Josie B. Kuhlman.
Berne	Adams	849		72.2		96	15	45	27†	41	2.25		1.20	0.0	7	17	10	4	nw.	H. M. Reusser.
Elkhart‡	Elkhart	801	8	73.4		95	15	48	26	33	3.01		1.13	0.0	11	15	10	6	nw.	Dr. Miles Medical Co.
Fort Wayne	Allen	775	14	71.8	+ 0.7	96	17	45	27†	44	3.98	+ 0.69	2.66	0.0	10	11	8	12	sw.	Orion E. Mohler.
Hammond	Lake	598	19	72.3	+ 0.8	94	12	44	28	41	3.12	+ 0.87	1.38	0.0	4	14	10	7	.....	Carson W. Whitney.
Howe	Lagrange	886	5	70.4		95	9	45	27†	35	1.93		0.92	0.0	5	22	1	8	w.	James E. Zook.
South Bend	St. Joseph	726	17	71.3	− 0.4	94	15	46	27	36	2.82	− 0.44	1.00	0.0	11	18	5	8	se.	Henry H. Swaim.
Whiting	Lake	606	....	73.0		89	15†	48	26	30	4.09		2.06	0.0	6	7	14	10	ne.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	8	62.8		90	12	35	11	50	3.50		3.00	0.0	2	9	0	16	n.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300	....	61.2		87	21	36	31	41	3.52		1.50	0.0	4	17	9	5	nw.	Frank McMonigal.
Blaney	Schoolcraft		3	61.8		81	16†	36	19	36	4.24		1.40	0.0	7	20	1	10	s.	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	22	62.8	+ 0.6	84	20	42	25	29	4.69	+ 2.32	1.28	0.0	9	18	6	7	w.	E. S. Grierson.
Chatham	Alger	875	9	60.4		86	12	34	19	40	3.97		1.03	0.0	14	7	12	12	n.	U. P. Experiment Station.
Deer Park	Luce	610	9	62.8		88	7	48	7†	40	1.90		0.95	0.0	5	13	1	17	nw.	Mrs. Sara E. McGaw.
Detour	Chippewa	585	9																	Dr. F. E. Cameron.
Eagle Harbor	Keweenaw	622	11	62.1	− 0.2	80	21	46	25	29	3.56	+ 0.39	1.55	0.0	6	14	12	5	w.	John Nolen.
Escanaba	Delta	612	37	63.2	− 1.3	77	21	44	26	28	5.22	+ 1.61	2.15	0.0	8	8	9	14	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	9	61.7		88	22	34	19	45	4.14		1.02	0.0	10	16	1	14	w.	W. B. Hatfield.
Grand Marais	Alger	610	9																	Mrs. Lena Truedell.
Houghton	Houghton	668	9	63.4	− 0.2	87	20	45	25	31	4.51	+ 1.64	1.62	0.0	15	10	13	8	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	13	60.3	+ 0.5	84	16†	32	19†	44	3.16	+ 0.75	0.80	0.0	6	15	7	8	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	9	66.2		89	12	41	19	47	2.56		1.11	0.0	5	17	10	4	nw.	Chapin Mining Co.
Iron River	Iron	1,504	13	61.0		86	12	35	19	48	2.90		1.20	0.0	5	21	8	2	w.	Victor D. Laing.
Ironwood	Gogebic	1,520	7	64.2		88	21	40	26	33	2.40		0.50	0.0	10	16	9	6	nw.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	10	62.6[d]	+ 0.4	87	12	41	29	37[d]	2.65	− 1.00	0.80	0.0	9	10	14	7	nw.	Cliv'd Cliffs Iron Co.
Isle Royale	Keweenaw	610	3	61.0		74	17	50	25	20	2.17		0.58	0.0	7	9	1	21	sw.	John H. Malone.
Mackinac Island	Mackinac	831	10																	M. I. S. P. Com.
Maple Ridge	Delta		4	61.3		86	12	38	19	38	5.67		1.30	0.0	10	14	4	13	n.	Herman Johnson.
Marquette	Marquette	734	39	62.9	− 0.6	90	12	45	25	28	3.33	+ 0.47	1.68	0.0	12	5	17	9	w.	U. S. Weather Bureau.
Menominee	Menominee	581	11	67.5	+ 0.7	89	22	45	26	29	4.57	+ 1.91	2.81	0.0	7	21	5	5	sw.	C. & N. W. Ry.
Newberry	Luce	773	8	60.0		85	12	29	31	41				0.0	....	10	16	5	nw.	D., S. S. & A. Ry.
Powers	Menominee	868	11																	C. & N. W. Ry.
St. Ignace	Mackinac	593	20	65.2	+ 1.8	83	12†	45	27	26	3.83	+ 0.82	1.20	0.0	9	13	6	12	se.	D., S. S. & A. Ry.
Sault Ste. Marie	Chippewa	614	22	61.8	+ 1.2	84	12	43	25	34	2.88	− 0.26	0.87	0.0	11	7	8	16	w.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	13	61.1	− 1.7	87	21	32	6	46	2.45	− 0.57	1.20	0.0	5	3	26	2	w.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263	....	64.0		87	20†	43	15	34	3.65		1.07	0.0	10	19	5	7	nw.	R. S. Schultz, jr.
Watersmeet	Gogebic		1	62.5		87	21	32	19	47	3.52		1.20	0.0	9	8	8	15	nw.	B. N. Grant.
Wetmore	Alger	878	13	61.5	+ 0.1	86	12	37	31	38	1.60	− 1.02	0.70	0.0	5	17	0	14	n.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	20	60.6	− 0.8	81	12	40	26	28	2.72	− 0.31	0.65	0.0	11	11	3	17	nw.	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	32	71.0	+ 1.5	97	15	42	27	45	1.58	− 1.61	0.61	0.0	6	7	22	2	w.	B. F. Gibbs.
Allegan	Allegan	698	19	70.6	+ 0.6	95	16	45	29	40	3.25	+ 1.09	1.76	0.0	6	11	10	10	w.	Pere Marquette R. R.
Alma	Gratiot	750	23	68.1	+ 0.8	91	17	40	26	39	1.72	− 1.02	1.02	0.0	4	10	18	3	sw.	P. M. Smith.
Alpena	Alpena	609	37	64.3	+ 0.5	86	22	43	26	30	2.84	− 0.50	1.88	0.0	11	10	9	12	nw.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	30	67.6	− 1.2	92	17	43	19	39	2.93	+ 0.23	0.99	0.0	6	1	17	13	w.	University of Michigan.
Arbela	Tuscola	728	14	69.6	+ 0.4	91	14†	45	27	33	1.93	− 0.66	0.65	0.0	10	8	12	11	s.	Wm. Atkin.
Battle Creek	Calhoun	822	26	69.8	− 0.9	92	17	45	27	37	3.52	+ 0.83	1.68	0.0	6	13	11	7	sw.	Elmer E. Sager.
Bay City	Bay	593	14	69.4	+ 1.1	90	17	45	26	29	6.05	+ 2.96	2.50	0.0	6	21	10	0	s.	Pere Marquette R. R.
Benzonia	Benzie	832	14	68.0	+ 3.4	87	12	50	27†	32	6.61	+ 3.82	2.95	0.0	6	19	6	6	nw.	Martin S. Joiner.
Berlin	St. Clair		21	67.8	− 0.4	92	15	41	27	38	2.54	− 0.35	1.45	0.0	8	9	13	9	sw.	R. O. Gould.
Big Rapids	Mecosta	906	14	66.2	+ 0.1	86	12	42	27	38	2.70	− 0.23	1.22	0.0	9	17	9	5	sw.	Charles Gay.
Bloomingdale	Van Buren		6	70.2		94	15	45	26	37	2.34		1.76	0.0	3	23	5	3	sw.	John M. Haven.
Cadillac	Wexford	1,293	1	66.8		88	20	45	26	36	4.63		1.73	0.0	7	10	11	9	sw.	A. J. Teed.
Cassopolis	Cass	903	9	71.2		90	15†	47	26†	31	1.90		1.45	0.0	4	24	0	7	ne.	Michigan Central R. R.
Charlevoix	Charlevoix	610	23	66.4	+ 0.1	88	21	50	13†	34				0.0	....	22	5	4	sw.	Pere Marquette R. R.

TABLE 1.—*Climatological data for August, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Michigan—Lower Peninsula—Cont'd.																				
Charlotte	Eaton		6	69.2		101	22	43	20	45	3.44		1.35	0.0	10	12	10	9	nw.	City of Charlotte.
Cheboygan	Cheboygan	611	20	65.0	0.0	90	21	42	29	34	4.25	+ 1.13	2.70	0.0	7	6	21	4	w.	E. A. Bouchard.
Clinton	Lenawee	830	20	70.7	+ 0.6	97	15	40	27	40	2.31	− 0.12	0.85	0.0	5	12	14	5	sw.	David Woodward.
Coldwater	Branch	984	13	70.7	+ 0.8	92	15†	44	26	34	3.55	−0.25		0.0	3	18	7	6	sw.	Lake Shore & Mich. So. Ry.
Concord	Jackson		5	70.5		97	17	42	27	41	2.82		1.60	0.0	3	13	17	1	sw.	Dr. W. N. Armstrong.
Croton	Newago	685	2	68.6		89	15	42	26	35	2.86		0.86	0.0	6	4	24	3	w.	G. R. 'Mus. Power Co.
Detroit	Wayne	730	39	70.6	+ 0.7	91	17	48	26	27	1.11	− 1.66	0.35	0.0	7	9	11	11	e.	U. S. Weather Bureau.
Durand	Shiawassee	799	3	70.3		91	13†	44	27	34[b]	1.60		0.42	0.0	6	18	8	5	sw.	Grand Trunk Ry.
East Tawas	Iosco	590	13	66.0	+ 0.2	82	9	45	26	28	1.48	− 1.21	0.40	0.0	8	22	8	1	w.	Detroit & Mackinac Ry.
Eloise	Wayne	640	13	69.8	− 0.3	92	14†	44	27	36	2.51	− 0.02	1.00	0.0	7	14	12	5	se.	John Gilmore.
Flint	Genesee	730	21	68.8	+ 1.3	92	18	42	27	33	1.78	− 0.78	0.50	0.0	9	14	13	4	w.	Wm. L. Fisher.
Frankfort	Benzie	589	6	67.2		84	17	53	26	30	5.07		2.10	0.0	6	16	0	15	s.	Capt. Geo. Morency.
Ganges	Allegan	665	1	69.7		89	15	51	27	39	2.49		1.85	0.0	4	17	9	5	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	64.2		84	22	45	18	25	2.46		1.18	0.0	3	18	0	13	sw.	Michigan Central R. R.
Gladwin	Gladwin	794	14	68.4	+ 2.3	90	12†	41	26	45	2.00	− 0.39	1.00	0.0	3	22	5	4	sw.	Geo. R. Smith.
Grand Haven	Ottawa	628	29	67.8	0.0	86	15	51	19	27	3.21	+ 0.63	1.92	0.0	10	13	11	7	s.	U. S. Weather Bureau.
Grand Rapids	Kent	707	21	70.6	+ 0.6	92	15	48	26	29	3.28	+ 0.69	2.84	0.0	6	11	4	16	sw.	U. S. Weather Bureau.
Grape	Monroe	625	20	70.8	+ 0.7	95	17	43	27	38	1.64	− 0.93	0.39	0.0	8	13	12	6	w.	Joseph W. Morris.
Grass Lake	Jackson	989	4	70.4		98	17	44	27	35	2.64		0.80	0.0	5	22	0	9	w.	Menzo Conklin.
Grayling	Crawford	1,147	21																	Dr. Oscar Palmer.
Harbor Beach	Huron	635	22	64.8	− 1.6	88	13	40	5	38	2.15	− 0.54	1.00	0.0	3	22	3	6	ne.	Pere Marquette R. R.
Harrison	Clare	1,159	17	67.0	+ 1.4	90	15†	44	26	40	2.95	+ 0.85	1.37	0.0	4	20	3	8	w.	Do.
Harrisville	Alcona	616	26	64.4	− 0.9	87	13	40	26	32	2.63	− 1.21	0.68	0.0	8	9	11	11	sw.	Dr. D. W. Mitchell.
Hart	Oceana	698	18			91	1				5.93	+ 3.54	2.80	0.0	5	7	20	4	sw.	Pere Marquette R. R.
Hayes	Huron	620	20	65.7	− 0.8	87	17†	45	26†	36[a]	1.69	− 1.11	0.92	0.0	5	20	0	11	nw.	C. F. Leipprandt.
Highland	Oakland	830	18								1.83	− 0.52	0.84	0.0	5					A. D. De Garmo.
Hillsdale	Hillsdale	1,150	13	68.4	− 0.5	89	15†	43	27	33	2.40	− 0.36	0.82	0.0	4	11	7	13	sw.	Prof. C. L. Herron.
Holland	Ottawa	610	4	67.7		87	15	45	6	34	3.22		2.67	0.0	8	10	19	2	sw.	City of Holland.
Howell	Livingston	924	18	68.1	+ 0.2	90	15	42	26	40	2.09	− 0.74	1.30	0.0	5	14	5	8	sw.	Frank Sharp.
Ivan	Kalkaska		21	65.4	+ 0.2	88	12†	37	2	42	3.95	+ 0.90	1.87	0.0	7	12	14	5	nw.	O. L. Giddings.
Jackson	Jackson	927	13	70.2	− 0.6	94	15	43	27	39	2.31	+ 0.13	0.71	0.0	7	10	17	4	nw.	City of Jackson.
Jeddo	St. Clair	667	21	68.2	+ 0.3	90	17	45	26	32	1.95	− 0.92	0.50	0.0	7	12	9	10	s.	William Bice.
Kalamazoo	Kalamazoo	955	34	70.2	+ 0.3	90	16†	47	26	33	2.59	0.00	1.99	0.0	4	9	15	7	sw.	Kalamazoo Asylum.
Lansing (Agr'l. College)	Ingham	820	46	68.2	− 0.4	90	17	44	26	33	1.76	− 1.10	0.63	0.0	9	11	8	12	s.	U. S. Weather Bureau.
Lansing (Capitol)	...do	881	23	69.9	+ 1.4	92	17	45	26	33	1.85	− 0.74	0.68	0.0	11	10	12	9	sw.	State Board of Health.
Lapeer	Lapeer	827	11	69.6	+ 2.7	94	17	46	26†	41	2.32	+ 0.02	0.71	0.0	7	23[a]	7[a]	0[a]	sw.	Michigan Home.
Ludington	Mason	586	12	66.8	− 0.8	84	1	44	4	34	5.15	+ 3.25	1.92	0.0	5	17	7	3	sw.	Pere Marquette R. R.
Luther	Lake	1,028	0	66.4		90	12	40	6	45	5.45		2.55	0.0	7	15	11	5	w.	John W. Nichoson.
Mackinaw	Cheboygan	592	14	62.1	− 3.5	86	20	42	11†	36	4.83	+ 0.81	1.75	0.0	7	7	17	7	sw.	Grand Rapids & Ind. Ry.
Mancelona	Antrim	1,121	14	63.8	− 0.7	88	12	37	26	41	2.59	+ 0.19	2.15	0.0	6	24	2	5	e.	Do.
Manistee	Manistee	600	13	68.6	+ 3.6	88	12†	44	31	30	3.80	+ 1.59	1.26	0.0	6	14	12	5	nw.	Pere Marquette R. R.
Midland	Midland	604	11	70.1[d]	+ 1.2	92	17	48	5	40[a]	1.30	− 0.78	1.00	0.0	3	19	6	3	ne.	Do.
Montague	Muskegon	660	7																	Gerard A. Whitbeck.
Morenci	Lenawee	811	3	69.6		92	15†	42	27	39	0.98		0.57	0.0	5	15	9	7	sw.	George J. Tripp.
Mount Clemens	Macomb	615	10			94	25				1.86	+ 0.12	0.60	0.0	7	13	6	12	sw.	Water Works.
Mount Pleasant	Isabella	826	11	67.3	+ 0.1	95	28	39	31	45	1.99	− 0.35	1.15	0.0	3	19	6	6	sw.	Pere Marquette R. R.
Muskegon	Muskegon	587	14	68.0	− 0.5	86	12	49	6	36	1.55	− 0.56	1.10	0.0	4	14	8	9	w.	Grand Rapids & Ind. Ry.
Old Mission	Grand Traverse	858	16	67.6	+ 0.5	88	11†	49	25	32	5.82	+ 2.88	3.25	0.0	6	1	26	4	n.	E. O. Ladd.
Olivet	Eaton	934	20	68.6	+ 0.6	89	17	46	27	28	5.76	+ 3.09	2.95	0.0	7	18	8	5	s.	Prof. G. A. Knapp.
Omer	Arenac	616	11	65.0	+ 0.2	89	22	38	28	44				0.0		12	10	9	nw.	Detroit & Mackinac Ry.
Onaway	Presque Isle	826	7	66.2		87	31	40	1	39	1.45		0.60	0.0	5	0	8	23	n.	Do.
Ovid	Clinton	760	20	70.4	+ 2.7	90	16†	41	27	37[a]	2.13	− 0.15	0.51	0.0	9	17	6	8	s.	Dr. B. L. Bates.
Owosso	Shiawassee	731	13	69.9	− 0.1	92	17	43	27	32	2.68	+ 0.49	0.85	0.0	8	2	27	2	nw.	Owosso Sugar Co.
Petoskey	Emmet	660	20	65.9	+ 0.8	86	22	47	19†	36	3.95	+ 0.86	2.40	0.0	10	11	9	11	w.	Grand Rapids & Ind. Ry.
Plymouth	Wayne	725	13			94	14				3.03	+ 1.25	1.00	0.0	5	10	19	2	sw.	Pere Marquette R. R.
Pontiac	Oakland	935	10	70.2	+ 2.5	93	17	45	27	32	1.46	− 1.48	0.43	0.0	6	22	5	4	sw.	Fred W. Shaw.
Port Austin	Huron	618	14																	Pere Marquette R. R.
Port Huron	St. Clair	639	35	67.8	+ 0.5	90	17	45	26	29	1.34	− 1.29	0.51	0.0	10	4	11	16	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14													14	9	8	nw.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	6																	State Forestry Com.
Saginaw	Saginaw	601	8	71.0		91	17	46	26	30	2.77		0.80	0.0	9	10	19	2	ne.	Postmaster.
Saginaw, W. S.	...do	601	15	69.4	+ 0.2	93	17	44	26	33	2.68	− 0.41	1.00	0.0	9	9[a]	16[a]	5[a]	ne.	Robert B. Hudson.
St. James	Charlevoix	681	4	63.4		80	11†	38	5	31	4.64		2.00	0.0	8	7	4	20	sw.	Rev. N. Wilhelm.
St. Joseph	Berrien	593	23	71.4	+ 0.9	89	11	53	26	32				0.0		14	10	7	nw.	City of St. Joseph.
Sandusky	Sanilac	790	1	67.0		89	15	40	31	43	3.48		2.03	0.0	6	11	14	5	nw.	Pere Marquette R. R.
Saranac	Ionia	639	15																	John Wallington.
South Haven	Van Buren	585	14																	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17																	City of Stanton.
Thornville	Lapeer	975	33	68.3	− 1.2	88	17	41	26	48	4.03	+ 1.11	1.50	0.0	4	11	5	15	se.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	13	66.6	− 0.7	86	20†	50	4†	30	5.50	+ 3.06	2.00	0.0	7	15	11	5	s.	Grand Rapids & Ind. Ry.
Vassar	Tuscola	641	9	68.0		92	17	42	27	35				0.0		3	20	6	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	13	69.2	+ 0.3	90	15	43	27	34	3.14	+ 0.14	1.17	0.0	8	23	2	6	sw.	Chas. A. Palmer.
Webberville	Ingham	884	8	69.7		93	14†	42	26†	37	2.81		1.22	0.0	7	10	14	7	sw.	I. R. Wadsworth.
West Branch	Ogemaw	973	7																	Michigan Central R. R.
Woodlawn	Montmorency		8	62.2		85	21	40	19†	40	5.42		3.15	0.0	9	15	5	11	sw.	T. C. Mathews.
Ypsilanti	Washtenaw	736	25	69.2	+ 0.5	91	17	43	27	37	2.39	− 0.15	0.41	0.0	9	3	27	1	sw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	23	71.9	+ 2.0	92	14	45	27	44[a]	0.77	− 2.78	0.50	0.0	3	18	7	6	sw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	72.0	+ 0.4	98	17	45	27	41	1.71	− 0.98	0.62	0.0	5	15[a]	11	5	sw.	J. W. Powell.
Bowling Green	Wood	670	30	70.6	+ 0.1	97	17	43	27	40	1.26	− 1.55	0.54	0.0	4	18	6	7	sw.	G. C. Housekeeper.
Bucyrus	Crawford	1,000	15	71.0	0.0	96	17	40	27	41	1.30	− 1.11	0.70	0.0	5	21	3	7	s.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	39	70.0	− 0.4	89	17	54	20	31	1.08	− 2.07	0.40	0.0	6	15	12	4	se.	U. S. Weather Bureau.
Cleveland (2)‖	...do	754	13	70.6	+ 0.3	90	3†	49	27	29	1.32	− 1.34	0.57	0.0	5	18	6	7	nw.	Rev. F. L. Odenbach, S. J.
Conneaut	Ashtabula	675	....	71.1		93	15	44	27	35	1.07		0.84	0.0	4	16	0	15	sw.	E. L. Ransom.
Defiance	Defiance	712	16	70.0	− 1.1	94	15†	41	27	41	2.20	− 0.15	1.02	0.0	6	21	5	5	s.	John F. Heilsborn.
Findlay	Hancock	776	21	71.3	− 0.6	98	17	43	27†	45	1.11	− 1.60	0.49	0.0	6	22	8	1	sw.	Dr. E. A. Moser.
Fremont‖	Sandusky	628	9	71.2		95	17	45	27†	46	2.53		1.20	0.0	6	17	8	6	sw.	E. Stanley Thomas.
Hedges	Paulding	725	16	70.8	0.0	95	17	43	28	39	4.01	+ 1.19	2.57	0.0	8	18	9	4	sw.	Charles Stutzman.
Hillhouse	Lake	997	18	69.6	+ 1.4	92	17	43	27	34	1.47	− 1.58	1.30	0.0	3	19	12	0	nw.	J. W. Doncaster.
Hiram	Portage	1,260	26	71.2	+ 2.3	91	14†	47	27	30	1.02	− 2.27	0.52	0.0	3	22	8	1	sw.	Prof. G. H. Colton.
Hudson	Summit	1,153	49	71.1	+ 1.4	97	16	40	27	40	3.54	− 0.02	2.00	0.0	5	27	4	0	n.	Dr. W. I. Chamberlain.
Lima	Allen	875	11	71.4	− 0.1	93	17	46	27	33	1.83	− 0.94	0.75	0.0	4	20	6	5	ne.	Miss Ollie De Long.
Medina	Medina	944	22	71.0	+ 0.3	96	14	40	27	44	1.20	− 1.96	0.50	0.0	6	24	4	3	se.	F. W. Clark.
Montpelier	Williams	880	18	69.2	− 0.8	93	15†	42	27	40	1.87	− 0.98	0.79	0.0	6	21	2	8	w.	G. L. Laser.
Napoleon	Henry	680	24	71.2	+ 0.1	94	15†	45	27	39	1.92	− 0.69	0.70	0.0	7	17	4	10	s.	A. C. Senter.
New Bremen	Auglaize	1 038	17	71.8	− 0.6	95	17	45	27	37	3.19	+ 0.51	1.53	0.0	4	19	10	2	sw.	Miss Lillian Grothaus.

TABLE 1.—*Climatological data for August, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
North Royalton	Cuyahoga	1,000	18	72.0	+ 1.6	96	14	45	27	36	1.24	− 2.37	0.75	0.0	5	23	7	1	nw.	W. S. Edgerton.
Norwalk	Huron	719	24	70.0	− 0.5	95	17	43	27	42	1.29	− 1.81	0.64	0.0	6	16	12	3	sw.	Dr. Albert Sheldon.
Oberlin	Lorain	855	35	72.2	+ 2.8	94	15	42	27	39	1.05	− 1.51	0.47	0.0	4	4	21	6	sw.	Prof. F. F. Jewett.
Ottawa	Putnam	720	18	70.6	− 1.5	95	17	44	27	39	2.54	− 0.16	0.94	0.0	5	1	14	16	w.	Prof. J. T. Maidlow.
Sandusky	Erie	629	33	71.7	+ 0.2	92	3	49	27	26	2.28	− 1.09	1.32	0.0	7	14	11	6	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	28	71.6	+ 0.7	93	17	47	27	31	2.84	+ 0.45	1.50	0.0	6	19	10	2	sw.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	39	71.8	+ 0.9	95	17	52	26	26	1.95	− 0.75	1.16	0.0	9	16	8	7	sw.	U. S. Weather Bureau.
Toledo (2)§	....do	606	6	71.6	.....	94	17	49	27	20	1.91	.....	1.10	0.0	8	20	4	7	nw.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	27	72.4	+ 1.4	93	15	44	27	36	2.59	− 0.09	1.17	0.0	5	14	10	7	w.	Prof. R. J. Kiefer.
Vickery	Sandusky	588	17	71.6	+ 0.6	100	17	42	27	40	1.82	− 0.96	1.32	0.0	7	12	13	6	ne.	John W. Barr.
Wauseon	Fulton	780	38	70.2	− 0.1	97	17	42	27	40	2.56	− 0.15	1.74	0.0	6	17	11	3	s.	Thomas Mikesell
Wellington	Lorain	856	16	71.6[a]	+ 0.4	95[a]	15	43[a]	27	40[a]	0.97	− 1.81	0.55	0.0	3	22	6	3	sw.	W. D. Warren.
Willoughby	Lake	649	16	.....	.....	.....	.....	.....	.....	.....	0.86	− 1.56	0.38	0.0	5	9	14	8	s.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	713	37	70.0	+ 0.6	88	24	49	27	29	1.76	− 1.33	0.66	0.0	9	14	13	4	s.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	19	68.0	− 0.8	86	13†	44	27	32	3.95	+ 1.17	1.25	0.0	10	10	15	6	s.	A. E. Cooley
Angelica	Allegany	1,340	27	64.6	− 0.4	85	3†	37	27	39	3.36	− 0.71	1.73	0.0	10	4	17	10	.....	Chales P. Arnold.
Appleton	Niagara	270	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Van Wagoner.
Auburn	Cayuga	715	41	68.0	− 0.8	93	16	45	27	33	5.78	+ 2.36	2.00	0.0	9	26	4	1	s.	A. H. Underwood.
Avon	Livingston	585	15	67.9	+ 0.3	86	3†	45	27†	35	2.15	− 0.99	0.98	0.0	6	20	7	4	.....	W. G. Markham.
Blue Mountain Lake	Hamilton	1,750	10	.....	.....	.....	.....	.....	.....	.....	5.95	+ 2.30	1.53	T.	9	20	6	5	w.	B. F. Merwin.
Brockport	Monroe	537	14	69.2	+ 0.5	89	3†	46	27	34	2.73	+ 0.14	0.65	0.0	8	12	17	2	w.	W. H. Lennon.
Buffalo	Erie	767	59	69.4	+ 0.6	86	3	54	26	27	2.72	− 0.27	1.16	0.0	8	6	16	9	sw.	U. S. Weather Bureau.
Canton	St. Lawrence	448	16	66.8	+ 1.0	86	3	41	30	38	2.69	0.00	0.94	0.0	9	10	16	5	sw.	Do.
Cape Vincent	Jefferson	246	5	66.9	.....	86	3†	47	26†	30	3.96	.....	0.78	0.0	10	12	11	8	s.	Verne M. Rice.
Carvers Falls	Washington	243	12	65.1	− 1.3	85	25	41	27	33	5.63	+ 2.29	2.87	0.0	5	24	4	3	s.	Washburn Fancher.
Chazy	Clinton	151	10	66.6	+ 0.2	84	13†	45	20†	32	2.93	+ 0.13	0.80	0.0	8	16	4	11	s.	W. R. North.
Dannemora	....do	1,490	5	65.6	.....	82	3†	43	27	28	2.69	.....	0.89	0.0	12	9	9	13	s.	W. N. Thayer.
Elba	Genesee	500	11	66.6	− 0.5	86	3	44	27	35	2.40	− 0.09	0.65	0.0	5	18	9	4	sw.	Jos. S. Wilford.
Fayetteville	Onondaga	530	9	65.0	.....	89	14†	44	27	37	3.48	− 0.22	0.92	0.0	8	15	12	4	nw.	Dana H. Wells.
Gabriels	Franklin	1,729	8	62.0	.....	83	13	35	27	41	3.23	.....	0.74	0.0	11	12	9	10	se.	Sanatorium.
Harkness	Clinton	622	8	65.0	.....	84	25	39	30	33	2.34	.....	0.69	0.0	10	21	5	5	s.	J. W. Harkness.
Hemlock Lake	Livingston	900	12	68.0	− 0.9	85	3	48	30	29	5.00	+ 2.08	1.60	0.0	6	14	5	12	s.	D. H. Westbury.
Hunt	....do	1,321	11	68.3	+ 0.8	90	16	42	27	33	3.80	+ 1.02	1.28	0.0	7	8	22	1	sw.	W. S. Barrager.
Ithaca	Tompkins	928	32	67.8	− 0.4	89	14	40	27	35	2.39	− 0.85	0.87	0.0	7	12	11	8	se.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	12	64.0	− 0.1	85	13†	35	30	44	2.12	− 1.51	0.74	0.0	14	12	10	9	s.	E. R. Wells.
King Ferry	Cayuga	.....	10	.....	.....	.....	.....	.....	.....	.....	2.35	− 1.05	0.67	0.0	5	23	3	5	s.	Lucius A. Goodyear.
Lake George	Warren	350	13	67.8	+ 1.1	86	14	42	27	36	4.38	+ 0.26	2.24	0.0	7	10	18	3	s.	Charles Forsell.
Lake Placid Club	Essex	1,864	2	57.4	.....	76	13†	34	27	34	4.65	.....	0.67	0.0	12	15	10	6	w.	Henry van Hoevenberg.
Le Roy	Genesee	920	20	68.0	+ 1.1	87	15	46	27	32	3.17	+ 0.08	1.13	0.0	9	11	10	10	s.	F. W. Ball.
Lockport	Niagara	650	23	68.0	0.0	85	17†	47	27	29	3.05	+ 0.46	1.40	0.0	9	15	1	15	sw.	J. E. Wakeman.
Lowville	Lewis	900	43	64.9	+ 0.1	86	3†	38	27	40	4.20	+ 0.98	1.03	0.0	8	20	6	5	s.	Charles J. Rice.
Lyndonville	Orleans	.....	14	.....	.....	.....	.....	.....	.....	.....	2.44	− 0.54	1.04	0.0	7	21	3	7	sw.	Milton St. John.
Moira	Franklin	200	10	67.3	+ 1.0	86	3†	42	30	36	3.22	− 0.03	1.00	0.0	10	13	17	1	w.	C. E. McBride.
Nehasane	Hamilton	1,750	2	61.0	.....	84	14	31	27	39	5.21	.....	1.03	0.0	14	18	6	7	e.	A. C. Heyburn.
North Lake	Herkimer	1,822	9	63.5	+ 0.5	86	15	40	27†	36	2.97	− 0.96	1.32	0.0	7	18	3	10	nw.	H. A. Paull.
Ogdensburg	St. Lawrence	175	26	68.7	+ 1.5	86	3†	47	27	32	2.43	− 0.61	0.51	0.0	9	19	10	2	sw.	State Hospital.
Old Forge	Herkimer	1,733	2	63.9	.....	87	15	38	27	40	6.60	.....	2.40	0.0	10	21	8	2	w.	Stuart W. Nelson.
Oswego	Oswego	335	40	67.8	− 1.0	86	25	49	27	28	4.65	+ 1.96	1.56	0.0	12	11	10	10	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	6	70.0	.....	86	15†	44	28	37	3.62	.....	1.05	0.0	8	19	8	4	.....	William Winke.
Palermo	Oswego	460	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Bartlett.
Perry City	Schuyler	1,038	30	66.9	+ 0.8	89	4	36	27†	50	2.28	− 1.33	0.78	0.0	8	16	10	5	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	4	66.8	.....	86	26	43	27†	41	4.71	.....	1.38	0.0	11	8	19	4	w.	E. D. Babcock.
Plattsburg	Clinton	170	60	69.2[a]	+ 1.9	92	3	46	24	37[a]	.....	.....	.....	0.0	.....	.....	.....	.....	se.	T. P. Davison.
Potsdam	St. Lawrence	300	34	62.6	− 3.8	89	4	34	30	40	3.83	+ 0.43	1.50	0.0	9	17	0	14	sw.	A. E. Sutuerland.
Raquette Lake	Hamilton	.....	2	62.5	.....	80	15	40	31	32	3.87	.....	0.94	0.0	11	17	5	9	w.	R. J. Dunning.
Rochester	Monroe	523	81	69.1	+ 0.8	89	3	49	27	28	3.10	+ 0.14	2.45	0.0	11	12	10	9	sw.	U. S. Weather Bureau.
Romulus	Seneca	719	18	69.0	− 0.3	88	16†	47	27	35	3.36	+ 0.13	1.66	0.0	7	15	7	9	.....	John H. Coryell.
Shortsville	Ontario	740	11	68.1	+ 0.1	86	25	47	27†	33	3.44	+ 0.65	1.29	0.0	9	15	13	3	se.	C. H. Latting.
Skaneateles	Onondaga	.....	15	.....	.....	.....	.....	.....	.....	.....	4.01	+ 0.58	0.97	0.0	11	.....	.....	.....	.....	Edward Conron.
Syracuse	....do	597	8	68.7	+ 0.1	87	15	47	27	28	3.39	+ 0.06	0.91	0.0	10	11	11	9	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	12	68.5	+ 0.6	88	3†	42	27	39	2.65	− 0.47	1.98	0.0	3	20	7	4	s.	Eva M. De Lano.
Trudeau	....do	1,620	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Tupper Lake	Franklin	1,522	10	62.5	+ 1.2	80	4†	40	30	34[b]	3.14	− 0.67	0.68	0.0	11	18	4	9	w.	Aaron W. Maddox.
Volusia	Chatauqua	1,167	11	67.9	+ 1.2	88	3†	41	27	39	2.43	− 0.22	0.93	0.0	6	11	16	4	w.	Benjamin Breads.
Wanakena	St. Lawrence	.....	0	64.0	.....	89	15	33	27	45	5.41	.....	2.34	0.0	9	7	12	12	sw.	J. Otto Hamele.
Watertown	Jefferson	737	18	67.9	− 0.4	88	3	46	27	33	3.98	+ 0.49	1.14	0.0	10	20	7	4	sw.	H. F. Dunlap.
Wedgewood	Schuyler	1,430	21	68.5	+ 0.7	89	3	43	27	33	2.06	− 2.31	0.67	0.0	9	19	10	2	sw.	Orlando F. Corwin.
Westfield	Chatauqua	837	14	67.6	− 1.1	87	25	46	27	28	2.38	− 0.51	0.83	0.0	7	.....	.....	.....	.....	John R. Rogers.
Youngstown	Niagara	.....	8	.....	.....	.....	.....	.....	.....	.....	2.31	.....	1.24	0.0	6	4	26	1	w.	B. V. Brookins.
Vermont.																				
Burlington	Chittendon	404	3	65.2	− 0.9	82	25	42	30	31	2.76	− 1.25	0.84	0.0	9	7	13	11	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	67.1	− 0.8	85	14†	41	27	31	5.02	+ 1.29	3.05	0.0	8	13	7	11	s.	C. H. Lane.
Enosburg Falls	Franklin	601	19	65.0	+ 0.4	84	13†	35	30	39	4.81	+ 0.67	0.78	0.0	16	14	8	9	s.	L. Howe Pomeroy.
Northfield	Washington	876	24	61.9	− 1.0	84	25	34	30	39	2.57	− 1.36	1.23	0.0	12	8	14	9	s.	U. S. Weather Bureau.
Rutland	Rutland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. L. Hindley.
Wells	....do	750	19	64.6	− 1.8	84	3	41	27	28	5.03	− 0.10	3.93	0.0	6	12	14	5	s.	E. R. Pember.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 4, Lake Region.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota.																																	
Duluth	Lake		.04	T.				.06	.09	T.			1.53	.18			T.	.21					.01		T.	.01		.03		T.	.25		2.41
Floodwood	...do																																
Mount Iron	...do							.27	.09	.03				.35												T.		T.		T.	.30		1.04
Stephens Mine	...do			.15	.01			.17	.13	.06			.67					T.				T.					T.	.02		.27		1.45
Two Harbors	...do	T.		T.				.10	.15	.25				.15				.50					.15					.50			.20		2.00
Virginia	...do																																
Wisconsin.																																	
Appleton	Fox	.06		.09					.10	.20					.53	.05	.17							1.00		1.45					.45		4.10
Ashland	Lake	.12		.22				T.	.83	.01				.10				.20							.12	.04	T.				.23		1.87
Bayfield	...do								.05	T.			*	.65				.20					T.		T.			*	.14		.40		1.44
Cecil	Fox	.39		.75						.10				.95	T.		.26	T.					.20	.07	.06	.89					.86		4.53
Chilton	...do	.12							.10	.05					.04		.25					.05		1.50	T.	.90					.45		3.46
Crandon	...do			.80														.33								1.10					.40		2.63
Florence	Menominee			.79														.55								.89					.52		2.75
Fond du Lac	Fox	.09							.12	.05					.95		.38				.12			.12		1.70					.69		4.22
Grand River Locks	...do	.07												1.18			.20				1.00			.23		.85					.65		4.18
Green Bay	Lake		.01	.03					.24	.10				.04	.21	.01		T.					2.38		14	2.67				.01	.24		6.08
Iron River	...do	.08		.60				.13	.36					.20				.15						T.	.08			.02			.46		2.08
Kewaunee	...do	T.		.25					.01	.10					.20		.12						1.80		1.00	.82					.35		4.65
Manitowoc	...do	.02							.12	.05					.06		.15						1.24			1.15				.02	.26		3.17
Menasha	Fox	.06			T.				.32						.27	.13		T.						1.02	T.	1.42					.31		3.53
Menominee Falls	Lake	T.	T.	.30					T.				T.		.22	.08	.85							.62		.98					.38		3.43
Milwaukee	...do	.01		.25					.07	T.					.02	.82	.02		.08		.10		.11	.57		.39					.31		2.75
New London	Fox			T.						.16					.50	.05		T.			.10		.40			.97					.60		2.78
Oconto	Lake		.38	.39					.15					.75	.08	.05							.47		2.65	.20				.19	.67		5.98
Oshkosh	Fox	.15							.13	.11					.07		.25							1.50		.65					.45		3.31
Pine River	...do	.10							.23	.20				T.	.12	T.	.03	T.	.01		.06		T.	T.		.30					.58		1.63
Plum Island	Lake			.43					.02					.01	.78									.94		5.37					.21		7.76
Plymouth	...do	.09		T.					.15	.10					.62	.01	.24		T.					1.27		1.12					.32		4.02
Port Washington	...do			.51					.21						.31		.58							.66		.66					.10		3.03
Racine	...do	.01		.04											T.	.01	.33		.07		.20			1.03		.28					.27		2.24
Ripon	Fox																									.75					.57		
Sheboygan	Lake	.08		.30					.12	.66					.18	T.	.61		T.					1.65		.93				T.	.40		4.93
Sturgeon Bay	...do	T.		.63					.01	.20				T.	.33	T.	.21							.83		4.57				T.	.23		7.01
Superior[1]	...do		T.	.03					.21	.05				.92				.16								T.					.50		1.87
Waupaca	Fox	.28		.01					.05	.21				.43	.32	.12					.05		.01	.42	T.	.10					.66		2.66
Illinois.																																	
Chicago	Lake Michigan	.12		T.						T.					T.	.55	.15		.05		.40			1.81		T.					T.		3.08
Indiana.																																	
Auburn[1]	Maumee		.37								.06							2.56	.10	.06				.33	.07		.53					.03	4.11
Berne	...do		.07					T.		.07							.34		.25					.02		1.20					.20	2.25
Elkhart[1]	St. Joseph		.29						T.	.07	.40					.05	.14		.10	.02	.02			1.13		.33					.46	3.01
Fort Wayne	Maumee		.08	T.				T.		.02				.13	T.	.01	.26	2.30		T.	T.			.48	.01	.32					.27	3.98
Hammond	Lake Michigan									.40					1.24									1.38					.10				3.12
Howe[1]	St. Joseph		.27								.27							.10						.92			.37						1.93
South Bend[1]	...do		.04								.28						.53	.02	.01	.12		.05		1.00	.06		.20					.51	2.82
Whiting	Lake Michigan	.20								.05						1.20			.09		.49			2.06									4.09
Michigan—Upper Peninsula.																																	
Baraga	Lake													.50																3.00			3.50
Bergland	Ontonagon			1.20	T.			T.			T.			.34				T.					T.		T.	1.50		T.			.48		3.52
Blaney	Manistique	.20		.70						1.00				.60												1.40			30	.04			4.24
Calumet	Lake	.20		.21					.41	.48				1.28				.21								1.05			.02		.73		4.69
Chatham	...do	.03		.52	.04				.05	.20			.48	.50			.04	.31					.32		.07	1.03		.14			.24		3.97
Deer Park	...do			.25							T.			.20											T.	.95			.30		.20		1.90
Detour	St. Marys																																
Eagle Harbor	Lake			.40	T.	T.				.50	T.		.50	T.	T.			.06				T.	T.		T.	1.55	T.				.55		3.56
Escanaba	...do		T.	2.15	T.				T.	.03			.12	.07		T.		T.					1.98		.13	.55					.19		5.22
Ewen	Ontonagon			1.02						.76		.48		.25				.25					T.		.65	.10		.02	.03		.48		4.14
Grand Marais	Lake																																
Houghton	...do	.02	.57	.18				.10	.53	.05			.60	.20				.14				T.	.02		1.06	.56		.03	.02		.43		4.51
Humboldt	Escanaba			.36									.40	.80				.10							.80	.70		T.					3.16
Iron Mountain	Menominee			1.11						T.			T.	T.	T.			.30					T.		.25	.46					.44		2.56
Iron River	...do			1.20	.30			T.						T.				.80							.10	.50							2.90
Ironwood	Lake	.10		.48	.08		.04	.37						.25				.14				T.				.50		.04			.40		2.40
Ishpeming	Escanaba	.15		.20	.10			T.	T.					.40				.30					T.		.20	.80		T.	.20		.30		2.65
Isle Royale	Lake	.19		.22					.10	.28				.58				.50													.30		2.17
Mackinac Island	...do																																
Maple Ridge	...do			1.02						.12			.55	1.20			.05	.45				1.07			.62			.11			.38		5.67
Marquette	...do			.36	.02				.09	.03	T.		.50	T.	.01			.30					T.		.99	.77		.15	.03		.08		3.33
Menominee	Menominee			.82					.08					.30	.12			T.					.13			2.81					.31		4.57
Newberry	Tequamenon				.25					.10			.20					.43				.05			1.00								
Powers	Lake																																
St. Ignace	...do	.42		.62	.06					.10				.31	.35									.73			1.20				.05		3.83
Sault Ste. Marie	St. Marys			.12	T.	.01				.84				.03			T.					.85	.02		.11	.68	.01		.17		.04		2.88
Thomaston	Lake			1.20				T.	.30									.25				T.			.46	.24		T.					2.45
Victoria	Ontonagon			.50	T.				.01	.16				.31				.15				T.	.78		.13	.94	T.		.14		.53		3.65
Watersmeet	...do	.05	T.	.87	.04									.09				.24	T.					T.	T.	.97		.02	.04		1.20		3.52
Wetmore	Lake									.10				.70				T.					.10			.50					.20		1.60
Whitefish Point	...do	.12				.08				.09					T.			.65					.01	.14	.10	.54	.50		.40		.09		2.72
Michigan—Lower Peninsula.																																	
Adrian	Raisin									.01	.02							.36						.61	.35							.23	1.58
Allegan	Kalamazoo	.21		T.	.24					.10							T.		.10					1.76		.84					T.		3.25
Alma	Saginaw			T.	.05					T.							.55		T.					1.02	T.	.10							1.72
Alpena	Lake			.14					.03	.23	.02			.01	T.		.17	.03			.02		.29	.02	T.	1.88					T.		2.84
Ann Arbor	Huron	.02	.07							.04							.11	.45	.06			.01		.26		.65						.26	1.93
Arbela	Saginaw	.99								.68									.09			.30		.48		.39							2.93
Battle Creek	Kalamazoo	T.			T.						T.					T.		.07	.21					1.68		1.28					.05	.23	3.52
Bay City	Saginaw	1.20								2.50							.25	1.00						.90		.20							6.05
Benzonia	Betsie			.95	.03					.30							.49							1.89		2.95							6.61
Berlin	Clinton	.05		T.	.08					T.	.04						.03	.16	.48					T.		.25					1.45		2.54
Big Rapids	Muskegon			.02	T.					.35					T.	.02	.52		.05					1.22	.02	.48	.02						2.70
Bloomingdale	Lake															T.	T.		.16	T.				1.76		.42						T.	2.34
Cadillac	Manistee			.18	.18					.20							.80							1.73		1.53					.01		4.63
Cassopolis	St. Joseph		.05														.15							1.45								.25	1.90
Charlevoix	Lake			.42						.28				.04										.40									
Charlotte	Kalamazoo	.03	.10		.27					.01	.18				.07									1.31		1.35					.11	.01	3.44
Cheboygan	Cheboygan		.20	.40						.30				.40									.20	.05		2.70					T.		4.25
Clinton	Raisin		.85								.36								T.					.22		.23						.65	2.31
Coldwater	St. Joseph									T.									T.					1.40		1.40						.75	3.55
Concord	Kalamazoo	T.								T.									T.					1.60		.40					T.	.82	2.82
Croton	Muskegon	.60								.76														.86		.35							2.86
Detroit	Detroit	.35								T.	.02							.10	.12					.03	T.	.33						.16	1.11

TABLE 2.—*Daily precipitation for August, 1910. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Michigan—Lower Peninsula—Cont'd.																															
Durand	Saginaw	T.		T.	T.					T.	T.						.34	.42	.09			T.		.38		.20					.17	1.60
East Tawas	Lake			.05						.15	.18			.05			.40	.15						.25		.25						1.48
Eloise	Rouge	T.	1.00	T.						.02	T.						T.	.07	.35					.10	T.	.76					.21	2.51
Flint	Saginaw	.03			.10						.25						.08	.35	.50					.30		.12					.05	1.78
Frankfort	Betsie			.65						.42							.30							1.60		2.10						5.07
Ganges	Lake			T.	.17				.14								.33		T.					1.85		T.				T.		2.49
Gaylord	Cheboygan									1.14							T.						1.18		T.	.14						2.46
Gladwin	Saginaw	T.		T.						T.							.60							1.00		.40						2.00
Grand Haven	Grand	.02		.09					.44	T.					.02	.49	.10		T.				.03	1.89		.12				.01		3.21
Grand Rapids	do	T.		.02					.02							T.	.34						.93	1.91		.06				T.		3.28
Grape	Raisin		.29							.03	.39								.22					.26		.22	.21				.02	1.64
Grass Lake	Grand		.20							T.	.39								T.					.60	T.	.65					.80	2.64
Grayling	Au Sable																															
Harbor Beach	Lake									1.00						.20										.95						2.15
Harrison	Saginaw									.18							.68							1.37		.72						2.95
Harrisville	Lake	.03		.08						.68	.11						.20	.36						.02		1.15				T.		2.63
Hart	Pentwater			.03						.80							1.00						2.80			1.30						5.93
Hayes	Pigeon				.10					.25	.22						.92						.20									1.69
Highland	Huron																.24	.40	T.					.22		.12					.84	1.83
Hillsdale	Saint Joseph									T.							.27	T.	T.					.82		.60					.80	2.49
Holland	Lake	.20		.02					.01	.18							.04							2.67		.05				.05		3.22
Howell	Saginaw	.15		T.						.20								.05						.39						1.30		2.09
Ivan	Manistee			.22	.07					.21	T.				.04		.32							1.22		1.87						3.95
Jackson	Grand	.02	.25								.18								.03					.71		.58					.54	2.31
Jeddo	St. Clair	.37		T.	.07					T.	.33							.08	.42					T.		.36					.32	1.95
Kalamazoo	Kalamazoo	.07								T.				T.					.10					1.99		.42						2.59
Lansing (Agri. Col.)	Grand	.04		.19				T.	.03	T.						T.	T.	.30	T.			.01		.45		.63				.09	.02	1.76
Lansing	do	.05			.28					.06	.03						T.	.11	.01			.02		.50		.68				.09	.02	1.85
Lapeer	Saginaw				.04						.12							.61	.32			.37		.15		.71						2.32
Ludington	Pere Marquette		.32							.15							1.24							1.52		1.92						5.15
Luther	Manistee			.15	.03				.02	.14							.96							2.55	T.	1.60	T.			T.		5.45
Mackinaw	Lake	.32		.52						.57					.55								1.06	.06		1.75				T.		4.83
Mancelona	do	T.		.08	.02					.06					T.		.15							.13	T.	2.15						2.59
Manistee	Manistee			.31						.10							.98							1.26		1.03				.12		3.80
Midland	Saginaw	T.	.20	T.	T.					.10														1.00		T.						1.30
Montague	White																															
Morenci	Maumee									.02									.13							.57					.13	0.98
Mount Clemens	Clinton	.11		T.						.15	.30	.08						T.	.12					T.		.50					.60	1.86
Mount Pleasant	Saginaw															.21	.63						1.15									1.99
Muskegon	Muskegon	T.		T.						.10					T.		.25		T.					1.10		.10				T.		1.55
Old Mission	Lake			.69					.46			.05	.07											1.30		3.25						5.82
Olivet	Kalamazoo	.13	.02							T.	T.							.12	.18					2.15		2.95				.21		5.76
Omer	Lake	T.													T.			T.								T.						
Onaway	Cheboygan			.20						.15							.35						.60		.15							1.45
Ovid	Grand		T.		.39						.42	.08					.06		.14	.02				.51			.50				.01	2.13
Owosso	Saginaw	T.			.79					.12	.13							.85	.03					.51		.24					.01	2.68
Petoskey	Lake			.32	.10					.08			.10		.16	.12	.10						.45	.12		2.40						3.95
Plymouth	Rouge		1.00																	.75				.16		.36					.76	3.03
Pontiac	Clinton	T.	.43		T.					.15	.03								.05							.42					.38	1.46
Port Austin	Lake																															
Port Huron	St. Clair	.40		.08	T.					.07	.01						.02	.06	.01							.18				.01	.50	1.34
Reed City	Muskegon			.20																			.30		.30							
Roscommon	Au Sable																															
Saginaw	Saginaw	.77	.10	.05	T.					.80	.11						.12	.10	T.					.22		.50				T.		2.77
Saginaw, W. S.	do	.33	.02	.02						1.00	.04			T.			.12	.17	T.					.53		.44						2.68
St. James	Lake	.05		.88						.34			.45	.45	.45		.02									2.00				T.		4.64
St. Joseph	St. Joseph																															
Sandusky	Lake	.43			.03						2.03													.20	.04	.75						3.48
Saranac	Grand																															
South Haven	Lake			.05																.20	.25											
Stanton	Grand																															
Thornville	Saginaw										.29						1.00	1.33												1.50	4.03
Traverse City	Lake			1.00	.50				.50							.50						2.00		.50	.50						5.50
Vassar	Saginaw									.80																.45						
Wasepi	St. Joseph	.20								.13							.37		.04					.70		1.17				.25	.25	3.14
Webberville	Grand	.12			.05					.29							T.	.16						.74		1.22					.23	2.81
West Branch	Lake																															
Woodlawn	Au Sable	T.		.58	.02					.56	.03			.03	T.	.30	.25	T.						.50		3.15						5.42
Ypsilanti	Lake	T.	.11	T.						T.	.01							.37	.30			.37		.41	.30	.25					.27	2.39
Ohio.																																
Akron‖	Lake										.26	.01						T.		T.							.50						0.77
Benton Ridge	Maumee		.62					T.		.22	T.								.12		T.	.25				T.	.50						1.71
Bowling Green	Lake		T.							.17									.54			T.				.30	.25						1.26
Bucyrus‖	Sandusky		.25								.25							.05		T.			.05				.70						1.30
Cleveland (1)	Lake	.05								.20							.04		.07							.40					.32		1.08
Cleveland (2)	do	.04								.23							T.		.20								.57				.28		1.32
Conneaut	do		T.		.13						.07								.03								.84						1.07
Defiance‖	Maumee		.56								T.								1.02	.20		T.		.03	.02		.37						2.20
Findlay‖	do		.15								.18	.02								.24			.03				.49						1.11
Fremont	Sandusky	T.								.28	.37								.34	.02						.32					1.20		2.53
Hedges	Maumee		.48						.02	.01					.06				2.57					.01		.60					.26		4.01
Hillhouse	Lake		T.	T.	T.	T.				T.	.14								T.								1.30					.03	1.47
Hiram	do										.52																.48					.02	1.02
Hudson	do				.09					.02	.69								T.								.74					2.00	3.54
Lima	Maumee							T.		.30									.10							.75					.68		1.83
Medina	Lake									.45	.03	.10					.05		T.								.50					.07		1.20
Montpelier	Maumee																.40	.15	.08					.19		.79					.26		1.87
Napoleon	do		.63					T.		.02							T.	T.	.70	.11				T.		.11	.20				.15		1.92
New Bremen	do							T.		.57							T.		.24		T.					.85					1.53		3.19
North Royalton	Lake		.05							.22	.05																.75					.17		1.24
Norwalk‖	do										.30	.05							.05	.01			.24				.64							1.29
Oberlin	do		.03		T.			T.		.47	.28								T.	T.						T.	.27						1.05
Ottawa	Maumee		.83							.52	.05								.94			T.				.20					T.		2.54
Sandusky	Lake	.02	.12	.05						.21	T.								.24							.32					1.32		2.28
Tiffin	Sandusky	T.		T.					1.50	.13									.08			T.				.44	.09				.60		2.84
Toledo (1)	Maumee	.06	.07	.01						.02	T.							T.	1.16			.09		.02		.35					.17		1.95
Toledo (2)	do		.14	.02						T.	.03								1.10			.07		.02			.35					.18		1.91
Upper Sandusky	Sandusky		.57							.21	.09											1.17					.35							2.59
Vickery	Lake		T.	.15						.19	.15								.33							.16	.19				.65		1.82
Wauseon‖	Maumee		.02								.02	T.					T.	T.	.80	.94				.20	T.		.58				T.		2.56
Wellington	Lake									.55	.03								T.			T.					.39						0.97
Willoughby‖	do		.03		.05						.17									.23							.38						0.86

TABLE 2.—*Daily precipitation for August, 1910. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania.																																	
Erie	Lake	.02		.06						.24	.02						.05		.21							.52	.14					.50	1.76
New York.																																	
Adams Center	Lake	.07	.03		.56		.61	T.			.48	.02							.14	1.25			T.	T.	T.		.52					.27	3.95
Angelica	Genesee		.05	.01							1.73				.05				.55	.24			.03	.03			.57					.10	3.36
Appleton	Lake																																
Auburn	Oswego	.40	.18		.39						2.00								.30	.38			.58				.75					.80	5.78
Avon	Genesee	T.	.31		.18						.98								T.	.01							.32					.35	2.15
Blue Mountain Lake	Raquette		.35	.43	1.27	.43					1.37	.07							.17							.33						1.53	5.95
Brockport	Lake	.05	.13		.61						.42								.65				.09				.38					.40	2.73
Buffalo	Lake	.16		.29	T.				T.	.59	.57								.50				T.			.42	.14					.05	2.72
Canton	St. Lawrence	T.		.16	.10	.68	T.				.20	.03			T.		T.		.93	.01							.29					.29	2.69
Cape Vincent	do		.12		.73	.11	.17				.27							.38	.56	.40							.44					.78	3.96
Carvers Falls	Lake			2.87	1.09						.42	.92																				.33	5.63
Chazy	do		.75	.75							T.	.20				.10			.15	.10							.08					.80	2.93
Dannemora	do	.05	.08		.79	.03	.20	.03			.12	.20				T.			.05	.89							.06					.19	2.69
Elba	do	T.	.40		.50						.50								.35								.65					T.	2.40
Fayetteville	Oswego				.92		T.		.49		.51								.05	.51				.28			.70					.02	3.48
Gabriels	Lake				.71	.10	.42	.12			.15	.12				.02			.12	.74							.20					.53	3.23
Harkness	do	.01			.69		.08				.03	.25				.16			.10	.48							.22					.31	2.34
Hemlock Lake	Genesee	.25			.25				T.	1.10	1.00								.80													1.60	5.00
Hunt	do	.13		.31	.12						1.28								.96								.55					.45	3.80
Ithaca	Oswego	.14		T.	.37				.02	.09	.78								.44						T.		.55					T.	2.39
Keene Valley	Au Sable	.02	.10		.74	.06	.20	.03			.42	.02				.05	.03		.06	.27							.09					.03	2.12
King Ferry	Oswego	.30									.64								.38							.67					.36	2.35
Lake George	Lake	.05	T.		3.24						.87	.71			.29					.19							T.					.03	4.38
Lake Placid Club	Au Sable, W. Br.	.40			.45	.44	.10		T.	.32	.31	.10				.42			.63	.57							.24					.67	4.65
Le Roy	Genesee	.20	.21		.30		T.				.50						.10		.16	.10							.47					1.13	3.17
Lockport	Lake	.15	.28		.15	T.					1.40	.01							.13	.02			.12				.79						3.05
Lowville	do		.10		.75		.65				1.03					.20			.20	.87												.40	4.20
Lyndonville	do				.35						1.04	.04							.01				.08				.66					.26	2.44
Moira	St. Lawrence				.51	.18	.13				.62	.12							.70	1.00					.02		.18					.36	3.22
Nehasane	Lake		.28		1.03	.17	.63	.09			.65	.30				.30	.05		.13	.36				.17			.45					.60	5.21
North Lake	do				.30		.50				1.32	.08							.10	.42												.25	2.97
Ogdensburg	St. Lawrence		.07		.51	.02	.40				.10					T.	*	.40	.40							.23						.30	2.43
Old Forge	Lake		.70		1.00	.20	.10				.10	2.40								1.00							.65					.35	6.60
Oswego	do	.04	.10	.21	.13	.12	.08				.56							.50	.88				.01		T.		.46					1.56	4.65
Otto	do		.04		.08	.03					1.05								.84	.19							.39					1.00	3.62
Palermo	do		T.	.10	.60		T.			T.		T.	.60						.60														
Perry City	do		.27	.02	.18	.12			.04		.78								.40								.47						2.28
Philadelphia	St. Lawrence	T.	.16		1.38	.17	.17				.38	.22					.07	T.	.43	.48							.53					.72	4.71
Plattsburg	Lake																																
Potsdam	St. Lawrence	*			.34		.82	.05			.25	.01	.34							1.50							.26					.25	3.83
Raquette Lake	Raquette		.17		.94	.12	.42	.03			.80	.10							.12	.70							.43					.38	2.87
Rochester	Genesee	.18	.01	.76	.10	T.				.18	.28								.24				.02			.20	.21					.92	3.10
Romulus	Oswego				.03	.06					.86								.27	.03							.45					1.66	3.36
Shortsville	do	.24	.27		.26						1.29	.02							.32	.55							.29					.20	3.44
Skaneateles	do	.32	.30	.15	.25	T.	T.	T.	T.		.97	.03							.32	.20			.50	T.			.65					.22	4.01
Syracuse	do	.26	.01	.19	.17	T.	T.		T.		.91				T.				.16	.48			.28			T.	.46					.47	3.39
Ticonderoga	Lake				1.98						.30	.37	T.									T.				T.							2.65
Trudeau	do																																
Tupper Lake	Raquette		.06		.68	.10	.34				.40	.05				T.	.30		.08	.40							.24					.49	3.14
Voluzia	Lake		T.		.03				T.		.54								.41	.30							.92					.22	2.43
Wanakena	Oswegatchie		.21		2.34	.30	.38				.49								.14	.45							.59					.51	5.41
Watertown	Lake	.12			.46	.04	.40				.21	.24							.26	1.14							.60					.51	3.98
Wedgewood	Oswego		.11		.43				.06	T.	.67				.04	.03			.38	.05							.29						2.06
Westfield	Lake	T.		T.	.21					.02	.41								.83	.39							.31					.21	2.38
Youngstown	do	.41			.15						1.24								.25								.19					.07	2.31
Vermont.																																	
Burlington	Lake	T.	T.		.84	.02	T.	.03			.61	.15				T.	T.		.26	.43							.04					.38	2.76
Cornwall	do		1.20		3.05						.12	.40				.05											.05					.15	5.02
Enosburg Falls	do	.01	.50	.01	.55	.06	.75	.08			.04	.17	.03			T.			.05	.71			.36			.59				.12		.78	4.81
Northfield	do	.01	.12	.01	1.23	.04	.05	.01			.22	.31					T.		T.	.38							.08					.11	2.57
Rutland	do																																
Wells	do		.04		3.93		T.			T.	.26	.38								.37												.05	5.03

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 4, Lake Region.*

Date.	Duluth, Minn.		Wisconsin.						Chicago, Ill.		Fort Wayne, Ind.		Michigan, Upper Peninsula.										Michigan, Lower Peninsula.					
			Florence.		Green Bay.		Milwaukee.						Escanaba.		Ewen.		Houghton.		Marquette.		Sault Ste. Marie		Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	70	60	80	57	76	62	82	63	88	67	88	50	74	58	80	43	74	55	63	54	68	52	78	58	82	55	81	58
2...	70	58	79	45	75	59	75	67	76	71	92	65	69	53	82	41	74	51	72	52	75	50	72	50	85	62	80	51
3...	73	56	79	56	87	63	87	66	88	71	92	63	71	59	76	61	75	60	76	61	76	56	73	55	85	62	76	60
4...	68	50	66	56	70	53	76	61	79	66	83	61	63	51	72	44	63	55	62	53	62	52	68	50	81	64	71	56
5...	76	47	69	56	77	50	80	56	80	63	84	48	72	50	70	38	68	57	70	52	58	50	67	48	76	46	71	48
6...	70	53	76	62	80	52	76	60	75	65	89	49	74	52	71	41	71	54	62	55	63	49	74	53	84	47	78	52
7...	66	57	77	61	81	59	74	63	73	68	77	58	68	56	83	50	78	54	78	55	75	47	70	50	77	53	77	53
8...	79	52	83	64	87	62	86	62	88	65	91	54	71	63	81	60	80	60	80	63	76	56	71	55	87	52	85	52
9...	73	53	75	67	81	63	83	64	86	68	81	64	73	59	72	56	70	58	68	61	72	55	71	59	80	64	75	60
10...	79	52	75	60	77	57	76	60	76	63	87	60	73	56	73	58	73	57	64	57	63	53	72	54	81	58	74	52
11...	78	56	82	61	82	56	81	62	77	66	86	50	72	52	80	62	80	54	79	60	79	49	74	48	82	51	82	49
12...	81	61	87	.....	89	60	84	64	86	67	89	51	76	53	84	44	86	58	90	64	84	51	85	55	87	52	85	56
13...	71	60	74	.....	84	68	84	68	85	71	92	51	73	64	86	42	69	56	71	59	72	62	86	64	90	53	82	64
14...	67	56	.....	.....	68	64	75	67	82	71	95	51	68	57	74	55	70	51	60	50	68	58	71	61	90	58	78	62
15...	64	56	75	.....	70	52	73	64	82	70	91	64	72	54	78	37	72	51	64	50	75	61	71	61	91	62	83	59
16...	82	58	86	60	82	64	79	65	80	70	92	63	73	65	83	43	80	61	84	60	78	57	69	61	89	67	78	62
17...	68	57	75	.....	78	65	82	67	79	70	96	65	68	58	85	60	69	55	68	56	73	59	76	58	92	62	83	61
18...	74	50	.....	.....	77	59	73	63	73	69	77	68	72	52	72	45	71	53	66	53	70	54	75	53	74	67	77	50
19...	78	53	.....	.....	78	52	76	62	76	69	81	55	69	47	76	34	76	50	75	52	73	47	71	48	80	52	77	50
20...	85	59	.....	.....	85	63	80	66	80	63	76	55	75	62	85	40	87	56	88	60	83	49	80	50	77	55	88	52
21...	81	64	.....	.....	88	67	88	67	88	71	90	58	77	65	84	39	81	66	85	66	83	57	78	61	89	60	85	61
22...	73	56	.....	.....	92	66	88	71	89	71	85	64	74	63	88	50	81	62	79	64	74	59	86	64	85	64	83	67
23...	62	56	73	56	73	65	83	65	88	66	89	63	67	64	70	50	66	56	64	58	69	60	71	65	80	62	77	63
24...	62	54	70	57	86	67	89	71	86	75	90	70	72	58	69	45	66	54	69	54	70	60	82	63	86	69	74	65
25...	61	48	59	45	67	49	78	52	79	56	82	64	59	44	70	42	54	45	56	45	67	43	77	48	80	60	73	50
26...	74	46	70	39	73	46	70	51	68	53	74	46	72	44	70	40	70	51	73	48	66	45	70	43	65	48	67	45
27...	60	49	69	49	76	55	73	54	73	59	77	45	69	52	68	50	66	53	63	52	66	52	77	50	75	45	72	50
28...	59	52	69	48	71	59	72	58	72	63	82	45	67	52	69	50	62	52	56	47	66	46	67	52	79	50	75	51
29...	71	55	73	40	70	62	67	61	74	67	83	57	68	52	70	52	68	52	72	46	70	47	67	50	77	55	75	55
30...	69	53	71	54	77	59	78	60	84	66	91	60	75	60	75	51	66	57	75	53	63	53	74	59	87	58	75	54
31...	65	44	68	41	70	53	68	56	70	66	81	68	68	51	68	37	63	47	62	46	61	47	70	48	74	63	.....	.....
Mns	71.3	54.2	72.6[f]	54.0[g]	78.3	59.2	78.6	62.5	80.0	66.6	85.9	57.6	70.8	55.7	76.3	47.1	71.9	54.9	70.8	55.0	70.9	52.8	74.0	54.6	82.2	57.3	77.9[a]	55.6[a]

Date.	Michigan, Lower Peninsula.						Ohio.								Erie, Pa.		New York.								Vermont.			
	Detroit.		Muskegon.		Saginaw, W. S.		Cleveland.		Lima.		Sandusky.		Toledo.				Buffalo.		Canton.		Rochester.		Syracuse.		Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	77	63	78	60	80	58	78	57	84	55	82	58	84	61	76	58	73	61	72	54	78	54	76	58	75	53	74	45
2...	79	64	81	60	79	58	75	65	85	64	77	65	77	64	76	62	79	65	80	57	76	60	79	61	75	56	76	53
3...	86	66	78	67	88	62	88	66	88	79	92	67	88	67	85	66	86	64	86	54	89	63	85	58	81	52	78	46
4...	76	59	76	62	75	60	76	66	83	69	77	66	78	62	79	65	75	61	82	59	81	59	84	60	77	62	70	61
5...	75	51	73	52	78	46	73	61	83	50	77	60	77	56	71	60	69	56	69	54	67	55	67	55	68	56	69	55
6...	81	56	73	49	83	50	74	58	83	50	79	56	83	57	73	64	69	58	66	54	68	60	64	59	68	57	68	54
7...	70	61	78	50	74	54	70	62	74	60	71	67	72	65	69	60	71	58	75	56	74	59	72	59	73	55	70	50
8...	79	59	80	53	84	53	72	62	83	57	77	63	85	60	71	60	73	60	79	54	72	62	76	57	76	52	76	46
9...	79	66	76	64	84	63	85	60	81	65	86	63	80	66	83	57	79	59	82	54	82	57	80	59	80	55	77	49
10...	80	63	73	64	82	60	77	65	80	62	80	64	84	62	76	66	75	65	74	62	77	62	73	60	65	59	64	60
11...	75	60	78	52	80	53	70	61	80	63	75	60	78	59	72	61	73	61	76	55	77	59	73	58	74	59	74	55
12...	80	62	86	50	86	54	72	56	83	70	75	59	80	62	74	58	75	60	81	51	78	56	77	58	77	52	75	49
13...	85	64	80	64	88	57	78	60	85	55	81	62	84	62	80	63	85	61	85	57	86	58	85	58	81	54	81	46
14...	89	69	82	62	88	64	82	66	88	63	86	67	90	68	80	66	85	70	83	61	85	66	84	69	81	64	82	53
15...	89	67	84	62	86	63	85	66	91	63	87	68	92	70	84	68	85	68	82	59	86	63	87	66	81	62	82	60
16...	82	67	81	67	87	64	86	69	90	63	85	68	85	69	83	69	84	68	80	58	87	66	82	67	73	62	69	59
17...	91	70	85	64	93	63	89	70	93	63	88	68	95	70	88	71	85	70	82	58	85	68	78	62	77	58	73	59
18...	75	62	79	63	74	63	77	66	84	60	77	68	79	63	78	67	72	63	70	59	73	61	70	62	68	59	66	52
19...	76	58	76	54	78	49	71	60	84	59	75	61	78	56	71	61	71	58	72	50	74	56	72	56	70	50	68	46
20...	77	59	80	54	83	52	73	54	85	61	78	57	79	60	72	55	75	60	76	46	74	54	77	52	73	46	70	43
21...	84	65	84	53	88	59	83	58	86	54	88	62	88	62	81	58	84	57	83	53	84	56	79	58	79	48	79	40
22...	80	68	81	70	85	66	83	66	81	61	83	64	81	65	86	66	80	68	83	56	82	65	81	64	79	65	79	48
23...	76	65	80	62	78	63	84	69	83	67	83	70	80	65	84	69	80	71	82	67	85	67	82	68	78	64	80	52
24...	88	70	80	71	84	65	89	72	90	69	92	74	90	70	88	74	81	74	81	73	87	72	84	71	77	65	77	61
25...	81	54	77	60	81	55	87	56	80	49	86	63	83	59	88	59	84	59	85	74	87	65	86	71	82	69	84	66
26...	68	48	67	50	72	44	62	54	69	52	66	55	70	52	63	53	64	54	80	49	65	51	81	53	75	48	78	42
27...	74	53	70	50	77	45	68	50	70	46	71	49	73	53	69	49	70	56	71	46	72	49	71	47	71	42	70	35
28...	76	61	72	50	77	55	70	54	78	49	74	56	76	57	72	56	79	56	76	54	74	52	78	54	75	53	74	42
29...	75	58	75	50	78	58	73	62	80	55	72	63	73	59	72	60	74	57	71	47	69	60	76	52	70	49	72	43
30...	86	65	76	60	84	57	88	65	81	63	91	66	88	65	84	64	81	56	79	41	82	54	80	52	72	42	71	34
31...	74	61	73	59	76	63	80	65	80	66	80	64	76	63	80	63	74	63	69	59	76	63	73	63	64	58	68	49
Mns	79.5	61.7	77.8	58.2	81.6	57.3	78.0	62.0	82.7	60.1	80.4	63.0	81.3	62.2	77.7	62.2	77.1	61.8	77.8	55.8	78.5	59.7	77.8	59.6	74.7	55.7	74.0	49.8

Climatological Data for August, 1910.
DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

The weather during August was generally favorable for agricultural and other outdoor pursuits, although the month was somewhat cooler than usual and the first 10 or 15 days were very dry. The month, as a whole, was considered cool, notwithstanding the fact that the maximum temperatures were quite uniform and generally equal to or above the normal. There were, however, very few excessively hot days, and they were distributed between the 1st and 24th, and occurred mostly in Iowa. The night temperatures were moderately low during the larger part of the month and especially during the last decade. Frost was observed in northern Wisconsin on the 11th, 14th, 19th, and on the 26th or 27th, north of central Iowa and Illinois, and freezing temperatures were recorded at several stations in North Dakota, Minnesota, and Wisconsin on the 31st.

The drought, which had continued with few interruptions over the larger part of the district during June and July, was greatly relieved or entirely broken about the 15th, and the precipitation was about normal over the upper Mississippi Valley during the latter half of the month, with an excess in several localities. Vegetation revived quickly after the first good rain, and by the close of the month the fields were green again and the condition of late crops had improved materially.

Thunderstorms were more frequent during the second and third decades than during the preceding 2 months and they were more generally attended by hail and wind squalls, which did considerable damage to crops, windmills, and small buildings over small areas in various localities.

TEMPERATURE.

The average temperature was slightly below the normal in all of the States in the district, except Wisconsin and Iowa, where there was an excess of 0.6°. The monthly means by States ranged from 62.3° for North Dakota to 73.5° for Missouri. The warmest periods of the month were from the 1st to the 3d, 10th to 12th, 19th to 23d, and the 28th, and the coldest days were the 5th, 6th, 18th, 25th, 26th, 27th, 30th ,and 31st. The mean temperature for the district, as shown by the reports of 290 stations, was 69.4°, which is 2.1° below the normal. The highest monthly mean was 76.7° at Cobden, Ill., and the lowest, 59.4°, at Little Fork, Minn. The highest temperature recorded was 100° at Prairie du Chien, Wis., on the 24th; Bloomfield and Ottumwa, Iowa, on the 16th; Decorah, Iowa, on the 2d; Greene Iowa, on the 1st; Grinnell, Iowa, on the 22d; Marshalltown, Iowa, on the 24th; Ridgeway, Iowa, on the 21st; and Mexico, Mo., on the 23d. The lowest temperature recorded was 24° at McKinney, N. Dak., on the 31st.

PRECIPITATION.

The rainfall was generally very light during the first half of the month, and, while there was more precipitation during the latter half, there was a deficiency for the month in all of the States in the district, except South Dakota, Wisconsin, and Indiana. The departure in the other States was, however, less than 1 inch, except in North Dakota and Missouri, where it was −1.44 and −1.00 inch, respectively. Over the larger part of the district the rainfall was fairly well distributed geographically, and yet there were localities in all of the States where the rainfall was light, and droughty conditions continued during the entire month. The greatest amounts of rainfall occurred over eastern Iowa, central and northern Illinois, and southern Wisconsin, and the least over the Dakotas and northern Minnesota.

The average precipitation for the district, as shown by the records of 309 stations, was 2.96 inches, which is 0.32 inch below the normal. The greatest amount, 8.49 inches, occurred at Washington, Iowa, and the least, 0.34 inch, at Larimore, N. Dak. The greatest amount in 24 hours, 4.52 inches, occurred at Streator, Ill., on the 16th. A trace of snow fell at Aurora, Ill., on the morning of the 26th. Measurable precipitation occurred on an average of 7 days.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 13; partly cloudy, 10; cloudy, 8. The duration of sunshine was nearly or slightly below normal.

WIND.

Over the northern half of the district, northwest winds largely prevailed, while over the southern half, southwest winds prevailed in corresponding measure. The highest velocity reported was 42 miles per hour from the northwest at Madison, Wis., on the 23d, and from the west at Devils Lake, N. Dak., on the 30th.

MISCELLANEOUS.

A number of prairie fires occurred in North Dakota during the forepart of the month.

But little or no damage was done by frost, notwithstanding the fact that the temperature was below freezing on 1 or more days in North Dakota, Minnesota, and Wisconsin. The frost in northern Iowa on the 26th was only a mere trace and was confined to low ground in the northern part of the State.

From the 21st to the 25th the air was so filled with smoke from the fires in the northwestern States that the sun was nearly obscured at stations in northern Wisconsin and quite dim in other localities in that State. At Moorhead, Minn., the smoke was so dense on the 22d and 23d, that artificial light was required in all dwellings and business houses.

During a shower at Keokuk, Iowa, on the 20th, some of the hailstones which attended the storm measured 9 inches in circumference, but as the quantity was not great and the area covered by the storm was small, the damage done was slight.

Considerable loss was caused by hail and lightning during the month, especially in Iowa. The following items have been gleaned from press dispatches: On the night of the 2d and morning of the 3d a great deal of damage was done by lightning over northeastern Iowa. Near Finchford, a barn was struck and a team was killed; 5 horses, 2 cows, and the new harvest of oats and hay were burned near Dike. A barn near Janesville was destroyed with 2 cows and much hay and grain. A barn burned near Sinclair and 4 horses perished and grain, hay, and machinery were destroyed. Several barns were burned near New Hartford during the same storm and much personal property was destroyed. At Mason City a dozen houses were struck by lightning, but none of them burned. On the 15th a barn near Nevada, Iowa, was struck by lightning and it and the contents burned.

A severe hailstorm occurred at Centralia and Lore, in Dubuque County, Iowa, about noon of the 20th. It is said to have been the heaviest fall of hail and the most devastating in the history of the county. The stones were 8 to 9 inches in circumference. At Centralia the hail covered the ground to a depth of several inches like frozen snowballs and was followed by a rain, which amounted to almost a cloudburst. At Lore the hail came after the rain. On the same afternoon, severe hailstorms passed over portions of Benton, Linn, Henry, Washington, and Van Buren counties, which did considerable damage to the corn crop and window glass. On the 25th a large barn near State Center was struck by lightning and burned with its contents. On the

30th a barn and its contents were burned near Eldon. On the night of the 24th a small wind squall struck the A. L. Ames farm near Traer, wrecking 2 silos and blowing down much of the corn in the fields.

RIVERS.

The average stage of all rivers in the district was generally below the normal. There was, however, a slight rise noted in most of the streams during the latter half of the month.

In Minnesota, river traffic and the operating of saw mills was generally suspended.

At Dubuque, Iowa, river conditions were much the same as during July, and none of the packets were able to run owing to low water. The river at Prairie du Chien and Dubuque rose slowly during the month, chiefly as a result of heavy rains in Wisconsin, but it did not reach a 1-foot stage on any date. The lowest stage from Dubuque to La Crosse was one or two tenths above the lowest stage of 1864. The Wisconsin River rose slowly during the last 15 days of the month, and at the close there was considerably more water in that river than at the close of July.—*J. H. Spencer, Local Forecaster.*

On the 9th, and from the 11th to the 15th, the stage of the river at Davenport was 0.2 foot, the lowest during any August since 1894. River traffic between this city and points to the northward remains suspended.—*J. M. Sherier, Local Forecaster.*

The observer at Hannibal, Mo., reports that the stage of the Mississippi River was much below the normal at that point, and even the lightest draft packets had to suspend operations early in the month.

Burlington, Iowa, August 3.—For the first time in 46 years in the navigation season, the Mississippi River at Burlington this morning touched the low-water mark established in 1864. The wing dams are high and dry and sand bars are numerous; steamboat navigation with light packets is practically at a standstill. The low water threatens to seriously cripple the lumber industry here, as rafters can make but slow and hazardous progress—*Times-Republican, Marshalltown, Iowa.*

DRAINAGE AND ENGINEERING NOTES.

The survey of the Des Moines River was continued by the United States Army Engineers, under the supervision of Mr. A. O. Rowse. During the month of August, topography on both sides of the river, covering area subject to overflow, soundings and probings of the river bottom, and levels to determine water slope were taken for a distance of 32 miles, completing the field work to a point 86 miles below Des Moines, measured along the river, and 14 miles of topography and soundings were platted.

Burlington, Iowa, August 23, 1910.—At a meeting in Burlington to-night a new drainage district was formed, which will include 10,000 acres of swamp land lying between the Burlington main line tracks and the Carthage and Quincy branch road just east of Burlington in Illinois. The land is of little value now, except for fishing clubs, and by the new drainage system, will become of great worth as farm lands.—*Des Moines Register and Leader.*

TABLE 1.—*Climatological data for August, 1910. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days. .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																			
Amenia	Cass	934	12	65.1	− 1.0	92	19	37	26†	46	0.90	− 2.32	0.42	0.0	3	13	11	7	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	14	61.4	− 2.0	93	11†	28	26	51	0.77	− 0.79	0.60	0.0	5	11	5	15	se.	J. A. Kemp.
Cando	Towner	1,488	8	57.8[b]	.....	95	22	32	26	55	2.36	.....	1.40	0.0	4	.....	.....	.....	.....	G. Bennett.
Crosby	Williams	.....	3	60.2	.....	93	1	35	25†	41	2.68	.....	1.66	0.0	5	21	2	8	nw.	H. C. Kaschau.
Devils Lake	Ramsey	1,482	4	62.5	− 2.6	94	11	36	31	43	2.63	− 0.13	1.56	0.0	6	8	10	13	sw.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	10	60.6	− 3.8	93	19†	32	28†	47	0.86	− 2.02	0.45	0.0	2	13	6	12	nw.	C. J. De Vore.
Dunseith	Rolette	.....	12	59.8	− 2.8	95	20†	31	26	53	0.97	− 1.33	0.75	0.0	3	21	4	6	w.	L. H. Trowbridge.
Edmore	Ramsey	1,524	4	62.2	.....	93	10	31	31	49	1.23	.....	0.90	0.0	3	10	15	6	n.	H. R. Aslakson.
Forman	Sargent	1,249	15	.....	.....	.....	.....	.....	.....	.....	1.15	− 2.13	0.75	0.0	2	.....	.....	.....	.....	A. Maltby.
Grafton	Walsh	827	12	64.6	+ 0.3	87	3†	39	16	32	1.85	− 0.57	1.85	0.0	1	25	2	4	.....	H. La Moure.
Granville	McHenry	1,504	3	61.2	.....	97	28	33	30	47	0.60	.....	0.30	0.0	3	10	17	4	nw.	W. A. Christiansen.
Hannah	Cavalier	1,568	4	60.9	.....	95	11	29	25	49	0.71	.....	0.62	0.0	5	18	3	10	nw.	J. Moffatt.
Hansboro	Towner	.....	2	61.7	.....	94	20	32	31	46	1.47	.....	1.03	0.0	7	20	6	5	nw.	Geo. Dale.
Hillsboro	Traill	901	4	65.8	.....	93	20	35	31	41	1.78	.....	1.02	0.0	6	13	7	11	nw.	M. H. Norman.
Lakota	Nelson	1,519	3	61.3	.....	92	11	32	31	45	1.93	.....	0.90	0.0	5	9	17	5	w.	C. R. Bettes.
Langdon	Cavalier	1,615	14	60.0	.....	92	11	32	31	45	1.24	.....	0.91	0.0	4	14	0	17	sw.	J. Woolner.
Larimore	Grand Forks	1,134	14	63.4	− 0.6	95	21	37	31	44	0.34	− 2.68	0.30	0.0	3	.....	.....	.....	w.	Reuben Gray.
Lisbon	Ransom	1,091	5	65.0	.....	93	15†	31	31	52	0.73	.....	0.43	0.0	4	17	7	7	nw.	H. K. Adams.
McKinney	Ward	1,640	15	61.0	− 2.6	95	19†	24	31	56	0.42	− 0.96	0.42	0.0	1	11	15	5	nw.	N. P. Swenson.
Manfred	Wells	1,605	8	62.0	.....	95	11	33	31	46	0.92	.....	0.48	0.0	3	14	10	7	sw.	P. B. Anderson.
Mayville	Traill	975	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. C. McDonald.
Minot	Ward	1,557	11	63.2	− 2.6	95	11†	34	31	51	0.51	− 1.85	0.32	0.0	5	20	3	8	nw.	Wm. J. Farris.
Minto	Walsh	820	16	64.4	− 0.2	92	20	36	31	44	1.98	− 0.56	0.55	0.0	5	12	5	14	nw.	S. S. Marsh.
Oriska	Barnes	1,270	4	64.3	.....	91	21	40	31	42	2.53	.....	0.85	0.0	5	5	21	5	nw.	W. E. Williams.
Park River	Walsh	998	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Heyward.
Pembina	Pembina	789	11	60.0	− 3.8	90	11	32	31	40	1.32	− 1.29	0.94	0.0	5	13	0	18	nw.	C. W. Shumaker.
Power	Richland	1,020	17	63.8	− 3.1	91	20	30	31	50	0.78	− 1.75	0.58	0.0	2	12	9	10	nw.	J. A. Power.
Pratt	McHenry	.....	5	61.6	.....	96	19	30	18	55	1.03	.....	0.57	0.0	3	20	4	7	nw.	C. H. Butts.
Towner	...do	.....	.....	62.4	.....	95	11	32	31	46	0.85	.....	0.46	0.0	4	10	10	11	w.	Belle Bagley.
University	Grand Forks	830	18	64.8	− 0.1	94	11	33	31	52	0.89	− 1.63	0.3	0.0	7	8	16	7	nw.	W. R. Holgate.
Wahpeton	Richland	962	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. G. Burch.
Walhalla	Pembina	966	5	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.58	0.0	6	.....	.....	.....	.....	C. H. Lee.
Westhope	Bottineau	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Clark.
Willow City	...do	1,471	16	61.4	− 4.5	93	11†	33	25	49	1.26	− 1.58	0.95	0.0	3	8	15	8	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	71.8	+ 2.7	99	16	42	26	45[b]	3.85	− 0.09	1.20	0.0	11	14	13	4	se.	Edward Carey.
Alexandria	Douglas	1,391	16	65.2	− 2.2	89	11	40	31	39	3.08	− 0.62	0.80	0.0	7	14	4	13	nw.	P. O. Unumb.
Angus	Polk	870	8	62.8	.....	96	20	31	31	46	1.39	.....	0.97	0.0	5	10	11	10	ne.	John Nadvornik.
Bagley	Clearwater	.....	4	61.0	.....	91	20	28	31	50	0.71	.....	0.19	0.0	7	9	15	7	sw.	Jens Nelson.
Baudette	Beltrami	1,084	1	61.4	.....	89	11†	30	31	40	1.06	.....	0.40	0.0	7	12	6	13	nw.	Frank W. Schmidt.
Beardsley	Bigstone	1,090	17	66.8	− 1.3	95	12†	37	31	50	2.98	− 0.76	1.10	0.0	7	6	20	5	nw.	Roy A. Smith.
Beaulieu	Mahnomen	1,200	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Elizabeth S. Cooper.
Bird Island	Renville	1,039	20	67.8	− 1.2	91	12	40	26	39	2.97	− 0.50	0.73	0.0	8	12	14	5	nw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	17	69.1	+ 0.2	89	24	48	26	27	4.02	+ 0.21	1.86	0.0	12	9	10	12	sw.	W. D. Belden.
Campbell	Wilkin	984	.....	64.7	.....	92	11†	33	31	50	1.25	.....	0.30	0.0	9	17	0	14	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	4	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.40	0.0	1	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	17	68.3	− 0.5	91	12	46	26	31	2.20	− 0.74	1.04	0.0	7	15	9	7	nw.	Fridolin Tembreul.
Crookston	Polk	863	20	64.2	− 1.8	91	20	38	31	37	1.42	− 2.02	0.45	0.0	7	13	6	12	s.	A. G. Anderson.
Detroit	Becker	1,364	14	63.6	− 1.3	91	11	31	31	47	0.66	− 3.53	0.20	0.0	6	12	14	5	.....	George W. Peoples.
Fairmont (near)	Martin	1,240	23	68.8	− 0.5	89	1†	45	26	30	1.95	− 1.00	0.59	0.0	9	13	15	3	nw.	W. F. Wherland.
Faribault	Rice	1,003	13	66.8[d]	− 2.3	90	2	40	26	42[d]	1.97	− 2.09	0.54	0.0	7	15	9	7	nw.	Dr. A. R. T. Wylie.
Farmington	Dakota	902	22	69.1	+ 0.4	91	11†	42	5	38	2.03	− 1.44	0.72	0.0	9	10	5	16	nw.	D. F. Akin.
Fergus Falls	Ottertail	1,210	18	66.8	− 1.0	91	12	42	31	35	0.78	− 2.14	0.33	0.0	10	12	11	8	se.	Chas. E. Kissenger.
Fort Ripley	Crow Wing	1,136	4	64.6	.....	93	12	35	5†	46	2.31	− 0.92	1.16	0.0	5	15	1	15	nw.	J. J. Tucker.
Fosston	Polk	1,289	1	63.8	.....	91	20	34	31	43	0.95	.....	0.38	0.0	9	9	15	7	sw.	O. N. Hem.
Fram	Marshall	.....	.....	60.6	.....	93	20	28	31	50[a]	0.88	.....	0.45	0.0	4	8[a]	19[a]	3[a]	sw.	A. W. Clark.
Glencoe	McLeod	1,000	14	67.9	− 0.3	90	20†	39	31	37	1.92	− 1.31	0.35	0.0	7	9	19	3	sw.	C. G. Selvig.
Grand Meadow	Mower	1,338	23	70.1	+ 1.6	95	1	40	5	46	3.53	+ 0.11	1.36	0.0	12	18	6	7	nw.	C. F. Greening.
Hallock	Kittson	815	11	63.8	− 0.5	93	11	33	31	46	2.64	− 0.81	1.05	0.0	9	14	5	12	n.	D. A. Robertson.
Halstad	Norman	870	4	64.2	.....	94	20	33	31	45	0.92	.....	0.50	0.0	5	15	8	8	nw.	Aaron G. Holstrom.
Hinckley	Pine	1,050	5	65.2	.....	92	12	34	26	45	3.66	.....	0.95	0.0	7	8	12	11	s.	W. R. Newman.
International Falls	Koochiching	1,112	2	61.8	.....	91	20	31	31	44	1.20	.....	0.52	0.0	4	13	12	6	sw.	Rees Roe.
Kelliher	Beltrami	.....	3	62.4	.....	92	20	30	31	42	0.55	.....	0.20	0.0	4	17	14	0	sw.	A. Gilmour.
Lake Crystal	Blue Earth	.....	3	67.8	.....	89	11†	40	26	33	4.48	.....	2.28	0.0	8	19	8	4	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	22	61.8	− 1.7	91	20	35	31	40	0.66	− 3.21	0.23	0.0	10	3	20	8	w.	Hans Olson.
Little Fork	Koochiching	.....	.....	59.4	.....	93	20	28	31	45	1.34	.....	0.64	0.0	5	19	1	11	.....	O. C. Olson
Long Prairie	Todd	1,299	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. M. Sheets.
Lynd (2)	Lyon	1,173	18	65.9	− 2.4	91	2†	37	31	39	2.84	− 0.55	0.86	0.0	9	15	12	4	nw.	J. W. Rouse.
Mankato	Blue Earth	747	11	.....	.....	.....	.....	.....	.....	.....	4.40	+ 0.85	1.41	0.0	10	9	5	17	sw.	Sadie H. Blake.
Maple Plain	Hennepin	1,023	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Richards.
Milaca	Millelacs	1,072	13	64.8[c]	− 0.4	88	11†	32	31	45[c]	2.80	− 0.38	1.42	0.0	3[c]	9[c]	17[c]	2[c]	nw.	C. H. Foss.
Milan	Chippewa	955	16	66.1	− 2.7	98	21	42	26	39	4.03	+ 1.06	1.04	0.0	8	1	24	6	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	19	69.0	− 0.8	90	20	48	26	28	1.56	− 2.13	0.61	0.0	8	10	5	16	s.	U. S. Weather Bureau.
Montevideo	Chippewa	900	20	67.9	− 1.3	93	12	42	31	37	4.65	+ 2.10	0.94	0.0	10	12	6	13	nw.	Lloyd G. Moyer.
Moorhead	Clay	935	29	65.4	− 0.5	92	11	36	31	45	1.39	− 1.71	1.10	0.0	6	16	8	7	nw.	U. S. Weather Bureau.
Mora	Kanabec	.....	5	64.0	.....	91	11†	32	5	47	1.91	.....	1.01	0.0	6	19	9	3	nw.	Hans Peterson.
Morris	Stevens	1,170	25	66.8	− 0.8	93	12	43	31	36	3.44	+ 0.44	0.98	0.0	9	19	6	6	s.	D. T. Wheaton.
New London	Kandiyohi	1,215	16	64.2	− 5.2	93	12	40	27†	44	2.46	− 0.43	0.60	0.0	8	16	11	4	sw.	Harold Swenson.
New Richland	Waseca	1,180	16	69.6	− 1.0	91	16†	44	26†	37	5.22	.....	2.63	0.0	10	12	14	5	sw.	N. O. Tyrholm.
New Ulm	Brown	791	30	70.0	− 1.5	94	11†	41	10	47	5.97	+ 2.58	2.80	0.0	7	17	2	12	nw.	Andrew J. Eckstein.
Osakis	Douglas	1,343	3	64.8	.....	88	11†	36	26	42	2.89	.....	0.86	0.0	7	17	6	8	nw.	J. B. Johnson.
Park Rapids	Hubbard	1,426	20	63.8	− 0.4	94	12	34	31	45	0.68	− 3.27	0.38	0.0	8	13	1	17	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	23	65.1	− 0.7	91	11	39†	27	43	1.86	− 2.35	0.50	0.0	5	7	21	3	e.	Neil McKay.
Pokegama Falls	Itasca	1,280	23	61.1	− 2.1	87	20	33	31	42	2.36	− 1.40	0.79	0.0	8	9	14	8	nw.	Arthur L. Mampel.
Red Lake	Beltrami	1,152	2	64.2	.....	92	20	35	31	40	0.42	.....	0.15	0.0	5	8	21	2	w.	A. C. Goddard.
Red Wing	Goodhue	680	14	.....	.....	.....	.....	.....	.....	.....	2.52	− 1.58	0.88	0.0	9	12	1	18	se.	Louis Bach.
Redwood Falls	Redwood	1,050	3	69.2	.....	93	2†	43	31	37	3.62	+ 1.21	0.98	0.0	8	17	11	3	nw.	N. B. Anderson.
Reeds Landing	Wabasha	681	15	.....	.....	.....	.....	.....	.....	.....	3.74	− 0.13	0.68	0.0	10	14	0	17	se.	John Deschneau.
Rochester	Olmsted	991	6	68.0	.....	92	2	41	26	44	2.94	.....	0.75	0.0	10	12	2	17	s.	S. R. Case.
Roseau	Roseau	1,040	3	61.6	.....	90	11	31	31	48	2.64	.....	0.73	0.0	7	18	10	3	nw.	A. Waag.
St. Charles	Winona	850	19	68.8	+ 0.3	90	2†	44	31	42	5.68	+ 2.68	1.34	0.0	10	14	8	9	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	32	67.8	− 0.2	91	12	42	26	37	3.90	+ 0.40	1.49	0.0	6	10	11	10	sw.	Jos. H. Capser.
St. Paul	Ramsey	837	39	69.1	− 0.4	90	20	47	26	32	0.98	− 2.48	0.30	0.0	10	15	13	3	s.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	69.4	− 0.6	95	21	40	25	41[a]	3.03	− 0.40	0.64	0.0	8	5	14	12	nw.	Chas. C. Cavanaugh.
Sandy Lake Dam	Airkin	1,234	17	62.9	− 2.1	89	12†	36	31	47	1.52	− 2.59	0.87	0.0	6	12	8	11	nw.	U. S. Engineer Corps.
State Sanatorium	Cass	.....	3	64.0	.....	92	20	40	31	38	0.92	.....	0.53	0.0	2	18	6	7	nw.	Walter J. Marclacy.
Stillwater	Washington	694	5	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.40	0.0	9	15	2	14	sw.	Oscar Ostrom.

TABLE 1.—*Climatological data for August, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Cont'd.																				
Taylors Falls	Chisago	759	3																	Mpls. Gen. Elec. Co.
Warroad	Roseau	1,069	1	59.8		89	11	29	31	43	2.25		0.55	0.0	7	17	10	4	w.	John H. Sawyer.
West Concord	Dodge	1,232	1	69.3		91	2	43	26	33	3.63		1.00	0.0	10	7	17	7	nw.	H. H. Orcutt.
Willow River	Pine	1,046	12																	J. A. Brandt.
Windom	Cottonwood	1,336	4	68.8		96	21	37	26†	44	1.86		0.50	0.0	8	7	21	3	s.	Taber C. Richmond.
Winnebago	Faribault	1,100	11	69.3	− 1.2	93	1†	42	5†	44	3.75	− 0.22	1.05	0.0	11	9	16	6	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	22	64.8	+ 0.4	90	20	43	31	34	0.53	− 3.21	0.19	0.0	6	18	8	5	nw.	John Duncan.
Winona	Winona	700	15	71.6	+ 1.7	93	22	43	26	37	4.24	+ 0.37	1.45	0.0	13	11	9	11	e.	Perry C. Meyrs.
Worthington	Nobles	979	15	70.2	+ 1.7	95	20†	40	31	41	1.91	− 1.52	0.67	0.0	8	18	4	9		Milton P. Mann.
Zumbrota	Goodhue	917	15	68.6	− 0.9	91	7	41	31	46	3.04		1.02	0.0	10	15	13	3	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	18	66.0	− 2.7	94	12	39	31	44	3.38	+ 0.59	0.67	0.0	9	11	4	16	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	16	66.1	+ 1.0	88	22	39	26	39	3.81		1.99	0.0	5	10	13	8	w.	Elton C. Larzelere.
Barron	Barron	1,115	18	65.4	+ 0.5	90	12	38	31	47	1.80	− 1.65	0.87	0.0	5	20	10	1	w.	Wm. A. Kent.
Beloit	Rock	750	23	72.0	+ 1.4	89	22†	47	26	30	4.48	+ 0.87	1.12	0.0	9	6	19	6	nw.	Smith Observatory.
Big St. Germain Dam‖	Vilas	1,590	1	63.8		86	12†	36	31†	46	3.84		1.60	0.0	7	19	3	9	nw.	Oscar Brehmer.
Brodhead	Green	812	12	72.8	+ 2.2	94	22†	43	26	39	3.80	− 0.42	0.86	0.0	8	14	16	1	sw.	Hecktore D. Kirkpatrick.
Burnett	Dodge	880	6	69.6		91	12	44	26†	41	3.34		0.80	0.0	9	9	12	10	nw.	Geo. W. Smith.
Darlington	Lafayette	867	5	71.5		95	24	40	26	49	3.45		1.25	0.0	5	19	0	12	nw.	S. P. Nelson.
Deerskin Dam‖	Forest	1,625	1			86	12†				3.09		1.52	0.0	5	16	13	2	ne.	Wm. E. O'Neal.
Delavan	Walworth	920	17	70.6	+ 0.8	92	12†	42	26	42	4.17	+ 0.78	1.92	0.0	9	13	8	10	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11																	Geo. W. Butler
Downing	Dunn	983	8	65.4		90	12	37	31	49	1.53		0.60	0.0	3	4	4	23	se.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	19	68.4	− 0.8	89	12	43	26	38	2.80	− 0.46	1.29	0.0	5	13	9	9	sw.	Robert D. Whitford
Grand Rapids	Wood	1,021	11	68.6	+ 0.6	89	22†	41	26	42	4.08	+ 1.47	0.97	0.0	10	9	11	11	sw.	Willis B. Raymond.
Grantsburg	Burnett	1,095	19	65.7	− 0.7	92	11	38	31	49	2.81	− 0.64	1.03	0.0	5	9	12	10	sw.	Theodore Olsen.
Hancock	Waushara	1,091	18	70.5	+ 1.9	91	22	44	26	39	3.46	+ 0.42	0.93	0.0	9	11	7	13	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	15	67.4	− 0.3	91	22	39	5	45	3.66	+ 0.57	1.51	0.0	13	11	12	8	sw.	Walter S. Woods.
Hayward	Sawyer	1,197	19	64.8°	− 0.9	88	12†	40	6†	41°	2.49	− 0.98	0.64	0.0	6	11°	6°	9°	w.	William E. Swain.
Hillsboro	Vernon	1,000	19	67.6	+ 0.2	91	22†	38	26†	46	3.12	− 0.07	1.20	0.0	6	11	14	6	sw.	Emil V. Wernick.
Koepenick	Langlade	1,683	20	63.4	− 0.9	88	3	33	26	43	3.30	− 0.11	1.15	0.0	5	0	26	5	sw.	Edward S. Koepenick.
Lac du Flambeau‖	Vilas			66.2		89	12†	44	26	34	2.42		1.46	0.0	6	14	12	5	s.	W. J. Lovett.
La Crosse	La Crosse	714	38	70.5	+ 0.4	94	24	45	26	38	4.90	+ 1.58	1.97	0.0	13	11	8	12	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	19	70.8	+ 1.6	92	12†	46	26	35	5.31	+ 1.77	1.72	0.0	10	9	20	2	sw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	71.4	+ 1.5	96	24	43	26	36	2.44	− 0.26	0.74	0.0	8	13	15	3	w.	Edward Pollock.
Long Lake	Oneida	1,592	2	63.2		91	12	32	6	49	3.31		1.05	0.0	7	14	9	8	nw	Louie Frank.
Madison	Dane	974	32	70.6	+ 1.1	91	24	50	26	27	6.56	+ 3.35	3.15	0.0	13	7	15	9	sw.	U. S. Weather Bureau.
Mather	Juneau	962	6	66.5		94	22	36	6	50	3.67		1.39	0.0	11	11	8	12	e.	Frank Evans.
Mauston	...do	882	14	69.0	+ 1.2	90	22†	43	5	41	4.81	+ 1.47	1.20	0.0	9	17	8	6	sw.	Eugene L. Hitchcock.
Meadow Valley	...do	974	19	68.0	+ 0.9	93	22	40	26†	46	3.69	+ 0.48	1.21	0.0	10	3	21	7	sw.	Charles H. Johnson.
Medford	Taylor	1,420	19	66.5	− 0.8	89	16	39	26	43	5.18	+ 1.66	1.48	0.0	7	18	9	4	w.	*William Zeit.
Merrill	Lincoln	1,267	4	67.0		91	2	41	6†	45	3.47		1.24	0.0	6	18	7	6	w.	Frank M. McElroy.
Minocqua	Vilas	1,604	6	64.4		88	21	38	31	44	2.84		1.27	0.0	7	13	11	7	sw.	Benjamin W. Applebee.
Mondovi	Buffalo	738	2	67.9		90	12	38	26	41	4.34		1.85	0.0	12	16	5	10	nw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	6	70.5		93	22	43	26	37	6.45		2.22	0.0	10	16	4	11	w.	W. M. Lewis.
Muscoda	Grant	666	1	72.2		98	24	43	26	45	6.25		2.14	0.0	11	9	10	12	w.	Henry Eckstein.
Neillsville	Clark	996	21	68.6	+ 1.5	90	22†	42	26†	44	5.26	+ 1.98	1.43	0.0	7				nw.	William Heaslett.
New Richmond	St. Croix	990	5	67.8		93	12†	40	31†	44	0.86		0.56	0.0	6	14	12	5	nw.	Frank A. R. Van Meter.
Osceola	Polk	806	19	67.8	+ 0.8	94	11	38	31	52	1.05	− 2.23	0.43	0.0	6	15	5	11	w.	Charles W. Staples.
Park Falls‖	Price	1,492	18			88	21	36	31		3.14		1.40	0.0	7	10	11	10	nw.	Flambeau Paper Co.
Portage	Columbia	809	14	71.0	+ 2.3	95	12	45	26	41	3.98	+ 0.75	0.94	0.0	8	16	9	6	sw.	James Clear.
Prairie du Chien	Crawford	690	23	72.3	+ 1.2	100	24	44	6†	50	2.10	− 1.16	0.58	0.0	12	11	6	14	s.	Jas. A. Gillis.
Prentice	Price	1,551	12	61.2	− 3.3	85	22	31	19	44	3.03	− 1.10	1.26	0.0	7	6	10	15	sw.	Joseph G. Lash.
Rhinelander	Oneida	1,550	4	66.2		89	21	40	31†	44[a]	3.40		1.40	0.0	7	3	14	14	sw.	John Lind.
Sauk City	Sauk	758	2	71.6		96	22†	40	26	46[b]				0.0		9	14	8		Kilien Derleth.
Shullsburg	Lafayette	1,019	4	70.8		92	24	44	26	35	3.90		1.77	0.0	8	16	6	9	w.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	4	63.6		88	12	33	31	45	2.20		0.85	0.0	5	12	7	12	sw.	John M. Sayles.
Spooner	Washburn	1,104	15	65.4	− 1.5	86	20	40	27	40	1.95	− 1.21	0.98	0.0	7	16	10	5	sw.	Horace A. Bresee.
Stanley	Chippewa	1,082	6	66.1		87	22†	37	26	43	4.14		2.00	0.0	9	15	6	10	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	17								4.28	+ 1.39	0.99	0.0	7				nw.	Garry E. Culver.
Sugar Camp Dam‖	Oneida	1,582	1								2.50		1.22	0.0	6				w.	Robert Hayes.
Twin Lakes Dam‖	Vilas	1,625	1								2.89		1.20	0.0	6	5	20	6	nw.	Albert D. Hansen.
Valley Junction	Monroe	930	18	68.6	+ 1.5	92	22	40	6	45	6.09	+ 2.81	1.68	0.0	10	11	11	9	nw.	Frederick Muermann.
Viroqua	Vernon	1,412	19	71.6	+ 2.9	93	24	44	26	34	4.10	+ 0.32	1.76	0.0	11	9	15	7	sw.	Henry E. Rogers.
Vudesare	Vilas	1,600	2	62.0		88	21	34	19	44	0.96		0.96	0.0	1	14	15	2	w.	Louis L. Thomas.
Watertown	Jefferson	824	19	69.4	+ 1.0	89	22†	44	26	33	4.94	+ 2.21	1.20	0.0	12	12	14	5	sw.	Charles J. Salick.
Waukesha	Waukesha	864	14	70.6	+ 1.8	92	22	45	26†	30	2.80	− 0.33	0.85	0.0	10	9	22	0	sw.	Carroll College.
Wausau	Marathon	1,212	17	67.6	+ 1.1	89	22	42	26	37	5.39	+ 1.81	1.87	0.0	7	7	17	7	w.	George H. Halder.
Weyerhaeuser	Rusk	1,297	3	63.8		87	12†	34	31	45	2.44		0.92	0.0	7	7	17	7	nc.	Miss Etta Stiles.
Whitehall	Trempealeau	675	18	68.1	− 0.2	90	22	41	5	45	3.40	− 0.23	1.50	0.0	5	18	0	13	nw.	Hans J. Haugh.
Iowa.																				
Albia‖	Monroe	959	12	72.6	− 0.8	97	16	42	26	33	0.55	− 3.60	0.28	0.0	7	17	7	7	sw.	J. I. Chenoweth.
Algona‖	Kossuth	1,213	36	70.6	− 0.3	94	1	42	26	33	2.60	− 1.32	0.97	0.0	8	23	3	5	s.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	19	69.8	− 0.7	96	1	45	26	34	3.08	− 0.89	0.90	0.0	11	12	15	4	nw.	David E. Hadden.
Amana	Iowa	721	34	72.0	+ 1.1	96	1	45	26	37	7.50	+ 3.89	3.11	0.0	8	13	10	8	s.	C. Schadt.
Ames	Story	926	34	72.4	+ 0.2	98	24	40	26	40	2.75	− 0.92	1.00	0.0	9	16	10	5	s.	Iowa State College.
Baxter‖	Jasper	998	10	72.3	+ 0.4	97	22	42	26	35	3.13	− 1.42	1.30	0.0	8	18	11	2	se.	W. R. Vandike.
Bellevlaine	Benton	828	20	71.5	+ 0.7	96	1	42	26	36	3.26	− 0.89	1.40	0.0	9	13	10	8	s.	S. P. Van Dike.
Belmond	Wright			70.2		95	24	40	26	35	3.58		0.95	0.0	8	4	24	3	nw.	Geo. P. Hardwick.
Bloomfield‖	Davis		3	73.4		100	16	42	26	38	3.72		2.87	0.0	2	8	16	7	sw.	C. R. Davis.
Bonaparte‖	Van Buren		19	73.0	− 1.3	97	16	42	26	34	1.76	− 2.89	0.80	0.0	5					B. R. Vale.
Boone	Boone	1,134	5	72.8		98	1	46	26	31	2.97		0.89	0.0	9	16	4	11		Carl Fritz Henning.
Britt‖	Hancock	1,236	13	69.6	− 0.4	93	1	40	26	36	2.40	− 1.65	1.09	0.0	12	16	11	4	s.	L. M. Goodman.
Buckingham	Tama		10								4.33	− 0.70	1.66	0.0	7					J. S. Gwynn.
Burlington	Des Moines	544	14	74.2	+ 0.1	97	16	46	26	33	0.43	− 5.01	0.40	0.0	3	18	6	7	s.	Max E. Poppe, jr.
Carroll	Carroll	1,265	20	69.5	− 1.6	94	21	42	25	36	7.92	+ 4.21	2.36	0.0	10	12	10	9	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	28	73.0	+ 0.3	99	16	48	26†	38	6.10	+ 2.60	2.36	0.0	7	18	4	9	se.	W. J. Greene.
Charles City	Floyd	1,015	19	69.8	− 0.9	94	24	43	26	38	5.84	+ 2.42	1.46	0.0	13	7	9	15	sw.	U. S. Weather Bureau.
Clear Lake‖	Cerro Gordo	1,241	12	72.0	+ 0.3	95	1	50	26†	30	3.23	− 1.08	1.80	0.0	4	21	0	10	s.	Oscar Stevens
Clinton	Clinton	593	43	72.5	+ 1.2	95	22	43	26	41	2.41	− 1.24	0.75	0.0	7	9	13	9	sw.	Luke Roberts.
Columbus Junction‖	Louisa	595	9	73.1		93	2	47	26	29	4.82		2.48	0.0	8	19	11	1	nw.	J. B. Johnston.
Davenport	Scott	580	39	74.0	+ 1.0	94	22	50	26	28	4.31	+ 0.67	1.79	0.0	8	14	10	7	sw.	U. S. Weather Bureau.
Decorah	Winneshiek	875	17	72.9	+ 2.7	100	2	45	6	47	4.08	+ 1.04	1.60	0.0	7					F. H. Baker.
Delaware	Delaware	1,083	19	72.6	+ 3.0	95	2	45	26	37	2.10	− 1.44	0.50	0.0	9	13	15	3	s.	William Ball.
Des Moines	Polk	861	32	73.4	+ 0.4	97	22	45	26	31	2.40	− 1.21	0.79	0.0	9	9	10	12	s.	U. S. Weather Bureau.
De Soto‖	Dallas	866	10	73.4	+ 0.4	98	1†	41	26	46	3.40	− 1.57	1.53	0.0	7	21	4	6	sw.	R. D. Minard.

TABLE 1.—*Climatological data for August, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days. .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa—Cont'd.																				
Dubuque	Dubuque	639	37	72.8	+ 0.8	93	24	48	26	35	3.96	+ 0.92	1.51	0.0	10	11	9	11	s.	U. S. Weather Bureau.
Earlham	Madison		8								4.08		1.68	0.0	4					George Phillips.
Elkader	Clayton	727	31	73.3	+ 2.3	98	24	41	26	47	3.47	+ 0.57	1.25	0.0	11	17	12	2	nw.	Chas. Reinecke.
Elma	Howard		1	70.6		93	2	42	5	39	4.40		1.62	0.0	15	10	16	5	se.	H. A. Moore.
Estherville	Emmet	1,298	15	67.4	− 2.8	95	21	42	26†	39	1.60	− 2.00	0.40	0.0	9	20	0	11	s.	A. O. Peterson.
Fairfield	Jefferson		26	73.1	+ 1.8	95	16	45	27	34	3.47	− 0.61	2.88	0.0	6	19	6	6	s.	R. Monroe McKenzie.
Fayette‖	Fayette	1,003	20	71.1	+ 2.0	95	1†	40	26	44	4.38	+ 1.11	1.10	0.0	10				nw.	R. Z. Latimer.
Forest City‖	Winnebago	1,226	16	69.4	− 0.9	94	1	41	26	35	2.75	− 0.75	0.80	0.0	9	18	6	7	s.	J. A. Peters.
Fort Dodge	Webster	1,126	10	71.2	− 0.2	96	1†	43	26	35	5.21	− 0.43	1.64	0.0	10	14	3	14	s.	J. F. Monk.
Fort Madison	Lee	516	61								2.65		2.27	0.0	4	9	6	16	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	11								1.94	− 1.84	0.60	0.0	7					J. L. Wylie.
Grand Meadow	Clayton	1,180	19	70.0	+ 1.1	91	24	45	26	32	3.03	− 0.30	1.42	0.0	11	9	15	7	sw.	F. L. Williams.
Greene	Butler		12	72.3	+ 0.8	100	1	43	26	41	5.78	+ 1.91	1.41	0.0	10	4	17	10	s.	J. L. Cole.
Grinnell	Poweshiek	1,023	18	73.8	+ 2.2	100	22	42	26	39	2.05	− 2.57	1.00	0.0	8	14	13	4	sw.	D. W. Brainard
Grundy Center‖	Grundy	976	19	72.6	+ 1.6	97	24	43	26	37	4.92	+ 1.35	2.10	0.0	7	18	0	13	sw.	J. B. Calderwood.
Guthrie Center‖	Guthrie	1,077	15	72.5	+ 0.3	96	1	44	26	36	6.11	+ 1.79	1.24	0.0	10	16	8	7	sw.	D. G. Beardsley.
Hampton	Franklin	1,155	20	72.4	+ 1.8	99	1	44	26	34	5.40	+ 2.03	2.15	0.0	11	7	16	8	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	22	71.0	+ 3.1	96	1	40	26	36	3.86	+ 0.42	1.08	0.0	9	26	5	0	sw.	Henry S. Wells.
Independence‖	Buchanan	921	46	72.4	+ 2.3	96	2†	42	26	38	2.36	− 0.83	0.79	0.0	10	18	8	5	sw.	George Donohoe.
Indianola	Warren	969	19	73.5	+ 0.7	98	22	46	26	35	2.28	− 2.40	0.90	0.0	10	13	5	13	nw.	John L. Tilton.
Iowa City	Johnson	683	50	71.5	− 0.2	93	1†	44	26	38	4.98	+ 0.74	1.18	0.0	6	16	0	15	se.	A. G. Smith.
Iowa Falls	Hardin	1,170	17	68.9	− 1.0	93	24	40	26	35	6.01	+ 2.63	1.55	0.0	9	24	1	6	sw.	J. B. Parmelee.
Jefferson‖	Greene		11																	G. W. Jackson.
Keokuk	Lee	547	39	74.4	− 0.2	95	16	48	26	27	0.92	− 2.32	0.67	0.0	5	14	15	2	s.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	18	72.2	− 1.8	96	16	44	26	32	3.50	− 0.32	2.57	0.0	6	7	14	10		J. H. Landes.
Knoxville‖	Marion	920	15	74.2	+ 0.5	98	22	44	26	34	2.73	− 1.94	1.45	0.0	4	15	7	9		Casey & Belville.
Lacona	Warren		11								2.10	− 2.72	0.54	0.0	9	13	12	6		J. B. Aiter.
Le Claire	Scott	576	10								3.62	+ 0.03	1.74	0.0	10					Miss M. T. Disney.
Marshalltown	Marshall	947	18	72.4	+ 0.6	100	24	43	26	41	3.38	− 0.26	1.56	0.0	7	17	2	12	nw.	Ralph B. Reasoner.
Mason City‖	Cerro Gordo	1,132	13	69.7	− 0.3	92	1	40	26	34	4.84	+ 1.24	2.48	0.0	10	15	13	3	se.	J. S. Mills.
Mount Pleasant‖	Henry	729	29	73.6	+ 0.3	95	2†	42	26	36	2.67	− 1.40	1.30	0.0	8	14	8	9	sw.	J. W. Edwards.
Muscatine	Muscatine		50								3.17	− 1.21	1.17	0.0	8					William Molis
New Hampton‖	Chickasaw	1,169	13	71.6	+ 2.1	97	2	43	26	38	4.81	+ 1.78	1.35	0.0	11	17	4	10	s.	A. F. Kemman.
Newton‖	Jasper	944	22																	J. P. Beatty.
Northwood‖	Worth	1,222	14	69.6	+ 0.1	91	1†	42	26	36	3.75	− 0.29	1.15	0.0	13	18	5	8	sw.	Chas. H. Dwelle.
Olin‖	Jones	760	12	75.0	+ 4.3	98	1	42	26	42	4.67	− 0.04	1.46	0.0	6					C. M. Miles.
Osage	Mitchell	1,184	23	72.2	+ 4.2	97	1	44	26	42	5.05	+ 2.02	1.78	0.0	6	11	12	8	nw.	A. D. Bundy.
Oskaloosa‖	Mahaska	843	34	73.0	+ 1.1	97	22	41	26	35	1.42	− 1.80	0.53	0.0	6	20	2	9	se.	Joseph Boyd.
Ottumwa	Wapello	649	15	75.2	+ 0.2	100	16	47	26	34	3.65	− 0.44	2.46	0.0	6	5	9	17	se.	W. J. Mesmer.
Pella	Marion	877	8	73.0		99	22	38	26	40	1.43		0.63	0.0	7	23	6	2	nw.	John H. Ver Steeg.
Perry‖	Dallas	975	9	72.0	− 0.5	99	1	45	26	34	4.60		0.95	0.0	12	15	12	4	sw.	Ed. S. Gray.
Plover	Pocahontas	1,426	14	69.6	− 1.3	95	1	36	26	38	3.12	− 1.41	1.72	0.0	6	24	3	4	s.	J. S. Smith.
Pocahontas	do	1,248	6	69.4		94	1	41	26	33	3.10		1.13	0.0	9	20	7	4	sw.	F. E. Hronek.
Ridgeway‖	Winneshiek	1,215	12	72.8	+ 0.8	100	1	47	26	40	5.63	+ 1.91	2.41	0.0	15	14	14	3	s.	Arthur Betts.
Rockwell City‖	Calhoun		14	71.8	− 0.5	96	1	46	26†	33	4.52	+ 0.44	1.05	0.0	7	23	6	2		C. M. Randall.
Sac City	Sac	1,278	34	71.2	+ 0.7	96	1	45	26	33	3.54	− 0.03	0.64	0.0	10	18	4	9	sw.	E. N. Baily.
St. Charles‖	Madison	1,070	9	74.7		99	1†	46	26	32	2.44		1.37	0.0	5	18	8	5	sw.	R. D. Minard.
Sigourney‖	Keokuk	877	14	73.6	− 0.2	96	16	43	26	35	1.40	− 2.45	0.63	0.0	7	2	28	1	sw.	J. T. Parker.
Stockport‖	Van Buren		8	72.5		97	16	41	26†	37	2.43		1.54	0.0	8	20	4	7	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	21	71.4	+ 0.7	96	1	42	26	32	2.66	− 0.66	0.84	0.0	10	18	7	6	s.	S. B. Fracker.
Stuart	Guthrie	1,216	11	72.4	− 0.8	97	22	44	26	35	4.41	+ 0.70	1.51	0.0	7	14	12	5	s.	J. P. Fox.
Tipton ‖	Cedar	807	11	74.6	+ 2.0	94	1†	51	26	31	5.44	+ 0.78	2.00	0.0	5	20	6	5	s.	F. K. Gregg.
Toledo‖	Tama	856	16	72.4	+ 0.4	96	22	42	26	37	2.82	− 0.88	0.83	0.0	7	20	5	6	se.	I. F. Giger.
Wapello‖	Louisa	588	12	71.6	− 1.9	90	22	49	26	33	3.33	− 1.67	2.33	0.0	4	18	11	2	se.	G. W. Schofield.
Washington	Washington	769	28	73.0	− 0.1	93	22	45	26	33	8.49	+ 4.78	4.22	0.0	7	12	14	5	sw.	Wm. A. Cook.
Waterloo	Black Hawk	862	27	72.5	+ 1.6	98	24	44	26	36	4.11	+ 0.50	1.31	0.0	11	17	8	6	se.	M. L. Newton.
Waukee	Dallas	1,039	7	73.6		97	1†	45	26	32	2.78		1.16	0.0	10	16	13	2	sw.	Samuel F. Foft.
Waverly‖	Bremer	948	14	71.2	+ 0.4	94	24	43	26	34	4.51	+ 1.55	1.42	0.0	10	12	13	6		H. S. Hoover.
Webster City‖	Hamilton		5	73.1	− 0.4	97	24	39	26	39	3.69		0.82	0.0	11	17	8	6	nw.	C. D. Carpenter.
West Bend‖	Palo Alto	1,197	17	69.7	+ 0.1	96	1	40	26	35	2.61	− 1.33	1.32	0.0	8	11	14	6	s.	Joseph Dorweiler.
Whitten‖	Hardin	1,036	13	71.4	+ 0.5	98	21	42	26	35	3.39	− 0.36	1.45	0.0	5	11	15	5	se.	F. P. Butler.
Winterset‖	Madison	1,129	19	74.4	+ 1.8	98	1†	45	26	34	3.24	− 0.49	1.36	0.0	7	9	7	15	s.	Robert S. Cooper.
Missouri.																				
Gorin	Scotland	700	24								2.03	− 0.81	1.56	0.0	4	11	13	7	se.	J. W. Pulliam.
Hannibal	Marion	534	18	73.3	− 1.7	94	22	47	27	29	1.64	− 1.74	0.54	0.0	8	9	12	10	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	32	72.4	− 2.4	95	16†	40	27	39	1.85	− 1.06	1.10	0.0	6	20	7	4	nw.	J. T. Farrell.
Mexico	Audrain	797	32	74.2	− 2.0	100	23	43	27	40	1.96	− 0.77	1.46	0.0	5	14	6	11	se.	J. F. Llewellyn.
Steffenville	Lewis	576	17	73.6	− 2.5	93	22†	48	26†	30	2.73	− 0.58	2.20	0.0	4	15	11	5	ne.	Frank Hall.
Sublett	Adair	1,000	30	72.9	− 1.6	94	23	42	26	31	2.50	− 0.77	2.00	0.0	2	9[b]	17[b]	3[b]	sw.	Lewis Spriggs.
Warrenton	Warren	865	20	74.8	− 1.9	97	23†	47	26	34	2.48	− 0.28	0.68	0.0	9	14	4	13	s.	Dr. J. H. Frick.
Indiana.																				
Collegeville	Jasper		11	68.8	− 3.4	90	2†	43	26	39	5.40	+ 1.38	1.25	0.0	9	9	16	6	sw.	Prof. L. C. Klosterman.
Knox	Starke	716	5	70.4		90	15	45	27	36	6.19		2.22	0.0	8	17	9	5	s.	W. R. R. Tatman.
Laporte	Laporte	810	14	70.2	− 1.2	93	15	44	27	39	3.53	+ 0.31	1.13	0.0	9	8	15	8	nw.	Wm. N. Walton, jr.
Plymouth	Marshall	790	7	69.6		90	15†	44	27	42	3.68		1.55	0.0	8	9	16	6	w.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	10	71.8	− 0.4	92	22	45	26	28	2.73	− 0.40	0.95	0.0	7	11	19	1	se.	Wm. B. Frew.
Alexander	Morgan	670	17	73.4	− 1.8	95	16†	42	26	35	3.62	+ 0.37	2.15	0.0	6	10	12	9	sw.	George H. Hall.
Antioch	Lake	861	9	71.5		95	22	44	26	35	3.61		1.50	0.0	5	10	18	3	w.	J. C. James, jr.
Astoria	Fulton	650	11	72.2[d]	− 0.4	94	22	42	26†	35[d]	1.16	− 1.94	0.80	0.0	4	14	12	5	s.	Ed. V. Bohl.
Aurora	Kane	687	31	71.2	+ 0.1	93	15	43	26	37	4.04	+ 0.58	1.37	T.	7	7	15	9	ne.	W. Holden.
Bement	Piatt	700	3	72.3		91	17	45	26	33	2.62		1.89	0.0	6	16	10	5	s.	Rev. C. S. Adams.
Benton	Franklin	598	8	75.8		95	17	53	27	34	0.73		0.28	0.0	3	7	11	13	ne.	F. H. Stamper.
Bloomington	McLean	840	19	73.1	− 0.9	94	15†	42	26	38	0.70	− 1.93	0.41	0.0	5	13	8	10	s.	Prof. H. N. Pearce
Cairo	Alexander	359	33	76.6	− 0.4	92	18	57	27	24	2.90	− 0.03	1.66	0.0	7	14	11	6	ne.	U. S. Weather Bureau.
Carbondale	Jackson	412		76.4		98	30	45	26	40	2.11		1.38	0.0	8	19	6	6	sw.	State Normal University.
Carlinville	Macoupin	663	20	73.4	− 2.5	95	16†	44	26	39	1.37	− 1.52	0.46	0.0	6	17	12	2	se.	R. O. Purviance.
Clinton	Dewitt	727		72.0		93	30	43	26	32	2.41		1.63	0.0	6	13	12	6	sw.	J. F. Ziegler.
Coatsburg	Adams	763	18	73.6	− 1.5	94	20	46	26	32	0.41	− 2.93	0.36	0.0	2	16	2	13	s.	Dr. J. R. Lambert.
Cobden	Union	656	27	76.7	− 0.8	96	21	50	27	37	1.89	− 1.75	1.05	0.0	3	15	13	3	n.	John Buck.
Dakota	Stephenson	929	5	71.3		92	22	45	26	35	4.06		2.05	0.0	6	11	18	2	s.	Rev. G. W. Kerstetter.
Decatur	Macon	685	19	73.0	− 1.7	95	30	44	26	36	3.81	+ 0.64	1.13	0.0	7	20	7	4	se.	Prof. J. H. Coonradt.
Dixon	Lee	725	20	73.2	+ 0.9	95	1†	45	26	47	3.14	+ 0.10	1.55	0.0	11	10	15	6		H. V. Bardwell.
Du Quoin	Perry	459	22	76.2	− 1.6	96	30	51	27	34	2.59	0.00	1.24	0.0	5	15	14	2	sw.	G. H. Knetzger.
Dwight	Livingston	600	17	72.6	− 0.4	95	15	43	26	39	4.66	+ 1.96	2.90	0.0	8	6	14	11	s.	Ed. O. Welch.
Elgin‖	Kane	716	3	72.0		90	22	45	26	34	2.87		1.21	0.0	6	4	27	0	sw.	Elgin Observatory.
Galva	Henry	842	18	73.0	+ 0.3	96	22	42	26	34	0.80	− 2.56	0.37	0.0	9	14	7	10	sw.	Prof. F. U. White.

TABLE 1.—*Climatological data for August, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Illinois—Cont'd.																				
Greenville	Bond	635	32	73.8	− 1.9	92	15†	50	8†	28	2.35	+ 0.37	1.10	0.0	8	17	7	7	se.	M. S. Oudyn.
Griggsville	Pike	650	25	73.2	− 2.0	92	22	46	27	33	0.85	− 1.81	0.42	0.0	3	10	16	5	nw.	Geo. F. Kneeland.
Halfway	Williamson	569	14	76.1	− 2.2	98	18	50	27	31	4.50	+ 1.93	1.90	0.0	7	17	7	7	s.	E. L. Hearn.
Havana	Mason	475	18	72.5[d]	− 0.8	98	22†	48	26	36[d]	0.58	− 2.45	0.26	0.0	4	12	19	0	s.	F. & C. Borgelt.
Henry	Marshall	500	22	73.6	+ 1.1	93	1†	42	26	34	1.77	− 1.23	0.70	0.0	6	15	11	5	sw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	16	73.0	− 3.2	94	16	48	26†	37	5.19	+ 1.76	2.02	0.0	6	18	2	11	s.	Ira L. Woodward.
Joliet	Will	541	19	72.4	+ 0.5	93	15	47	26	33	3.17	− 0.24	1.33	0.0	6	12	7	12	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	22	71.8	+ 0.9	93	15	45	26	40	3.58	+ 0.12	1.09	0.0	7	14	16	1	se.	Geo. Stevens.
La Grange	Cook	657	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. F. E. Sanford.
La Harpe	Hancock	698	31	71.6	− 2.8	95	22	40	26	35	0.38	− 3.49	0.18	0.0	3	16	11	4	sw.	Jno. S. Campbell.
Lanark	Carroll	883	21	72.1	+ 1.6	96	1	40	26	49	3.26	− 0.17	1.22	0.0	8	25	5	1	sw.	M. N. Werts.
La Salle	La Salle	536	33	72.9	+ 0.9	92	22	48	26	32	3.74	+ 0.88	3.31	0.0	7	11	11	9	sw.	U. S. Weather Bureau.
Lincoln	Logan	482	22	71.2	− 2.7	93	30	37	26	37	0.79	− 2.17	0.25	0.0	6	12	15	4	s.	Prof. C. S. Oglevee.
Martinton	Iroquois	633	23	72.4	+ 0.3	96	15	43	26	39	5.80	+ 2.22	2.30	0.0	6	15	6	10	se.	Jos. H. Peltier.
Mascoutah	St. Clair	425	20	75.8	− 0.4	97	22†	46	27	42	5.08	+ 2.31	3.90	0.0	8	15	8	8	se.	Geo. Henrich.
Minonk	Woodford	745	17	73.2	0.0	95	2†	42	26	37	2.46	− 0.70	1.68	0.0	7	15	15	1	sw.	O. M. Davison.
Monmouth	Warren	784	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hugh R. Moffet.
Morrison	Whiteside	685	16	72.4	+ 0.5	93	1†	42	26	40	2.44	− 1.30	0.67	0.0	7	15	15	1	sw.	S. A. Maxwell.
Morrisonville	Christian	638	11	72.2[b]	− 2.7	92	16†	44	26	33[b]	2.19	− 0.59	1.41	0.0	5	19	10	2	sw.	J. D. Lowis.
Mount Vernon	Jefferson	511	16	74.2	− 2.8	95	15†	49	27	37	2.07	− 0.63	0.71	0.0	6	16	8	7	s.	Theo. P. Stelle.
Oregon	Ogle	702	1	72.6	.....	94	22	45	26	36	2.54	.....	0.87	0.0	8	13	13	5	s.	Samuel Ray.
Ottawa	La Salle	500	24	72.9	+ 0.5	94	2†	42	28	39	3.91	+ 0.73	3.15	0.0	6	12	4	15	s.	Miss M. M. Harris.
Pana	Christian	692	24	73.5	− 1.0	92	15†	48	26	27	6.71	+ 3.24	2.68	0.0	8	27	2	2	se.	C. W. Sibley.
Peoria	Peoria	609	33	72.2	− 0.3	94	22	41	26	35	0.68	− 2.25	0.52	0.0	6	8	17	6	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	8	73.6	.....	94	15	46	26	37	4.39	.....	2.33	0.0	7	12	9	10	sw.	Geo. Butterworth.
Riley	McHenry	956	51	71.5	+ 2.1	90	1†	44	26	37	3.68	+ 0.26	1.60	0.0	8	10	14	7	sw.	John West James.
Rockford	Winnebago	763	18	71.8	+ 0.3	91	22	46	26	33	3.66	+ 0.25	0.95	0.0	12	17	5	9	.....	Hosmer C. Porter.
Rushville	Schuyler	670	19	73.2	− 0.9	93	22	46	26	29	2.04	− 1.18	1.28	0.0	5	15	12	4	s.	H. F. Dyson.
St. Charles	Kane	700	15	72.2	+ 1.1	91	15†	45	27	36	2.09	− 0.85	0.95	0.0	10	12	19	0	sw.	Dr. Wm. H. Bishop.
St. Peter	Fayette	.....	.....	74.6	.....	95	30	49	26†	36	1.90	.....	0.85	0.0	3	14	14	3	nw.	M. L. Lansford.
Sparta	Randolph	538	24	73.6	− 2.3	95	30	46	27	34	4.06	+ 0.84	2.38	0.0	9	19	9	3	s.	Jas. A. Caldwell.
Springfield	Sangamon	644	33	73.8	− 0.2	93	16	49	26	29	0.78	− 2.02	0.34	0.0	7	8	14	9	s.	U. S. Weather Bureau.
Streator	La Salle	626	17	73.2	0.0	96	15	42	26	42	5.38	+ 2.15	4.52	0.0	7	21	3	7	sw.	Edw. F. Sweetser.
Sullivan	Moultrie	530	10	72.4	− 1.8	94	30	45	25†	37	4.05	+ 0.85	1.83	0.0	5	16	13	2	sw.	C. A. Corbin.
Sycamore	De Kalb	855	30	72.4	+ 2.5	95	22	42	26	41	4.22	+ 0.65	1.25	0.0	7	13	2	16	sw.	Miss E. J. Davis.
Tiskilwa	Bureau	798	16	73.0	+ 0.8	95	22	44	26	33	1.67	− 2.41	0.76	0.0	10	18	5	8	s.	F. I. Smucker.
Walnut	....do	717	19	74.0[d]	+ 0.3	94	2†	45	26	35[d]	4.12	+ 0.69	2.77	0.0	7	10	19	2	se.	O. C. Nussle.
White Hall	Greene	573	2	72.3	.....	95	22†	41	27	38	1.12	.....	0.45	0.0	5	17	7	7	w.	Dr. R. A. Pritchett.
Windsor	Shelby	681	11	72.9	− 1.2	94	17†	43	27	39	3.55	− 0.03	1.67	0.0	7	12	14	5	s.	Herbert Rose.
Winnebago	Winnebago	900	23	72.4	+ 1.5	95	15	44	26	43[a]	3.70	+ 0.18	1.45	0.0	7	18	11	2	w.	Frank Osborn
Yorkville	Kendall	584	23	71.9	+ 1.2	94	15	42	26	41	3.90	+ 0.62	1.12	0.0	7	15	7	9	w.	Herman A. Grimwood.
Zion	Carroll	938	16	72.0	+ 1.8	94	1†	42	26	42	4.60	+ 1.38	1.82	0.0	5	23	5	3	w.	Robt. F. Gillogly.

[a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs
‖ Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 5, Upper Mississippi Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota.																																	
Amenia	Red				T.			.42								.13	.25															.90
Bottineau	Mouse		T.		.02		.06	T.	T.	.02							T.	.01												.60		0.77
Cando	Sheyenne						T.		.03							1.40														.91	.02	2.36
Crosby	Mouse		T.				.68									1.66									.22					.07	.05		2.68
Devils Lake	Sheyenne	T.	T.	.03			.01		.01							1.01	T.			T.		T.						.01		1.56			2.63
Donnybrook	Mouse		T.				.45									T.	.41								T.								0.84
Dunseith	...do	T.	T.	T.	T.	.12	.10	T.	T.								T.	T.												.75			0.97
Edmore	Sheyenne			T.	T.				T.							.23	.10			T.										.90	T.		1.23
Forman	...do	T.	T.										T.	T.		.40												.75				1.15
Grafton	Red																												1.85				1.85
Granville	Mouse		T.				.25					T.				T.	T.									.05			.30				0.60
Hannah	Pembina	T.		.01			T.	.03	.01			T.				T.	.04													.62			0.71
Hansboro	Red	T.		.10			.05	.20	.03				.01							T.							.05		1.03				1.47
Hillsboro	...do		.03	.25				.27	.02								1.02														.19		1.78
Lakota	Sheyenne	.01	T.	T.			.10		.12						T.	.80	T.					T.						T.	.90				1.93
Langdon	Pembina						T.									.11	.20				.02									.91				1.24
Larimore	Red						.30			.01							.03																	0.34
Lisbon	Sheyenne	T.						T.					T.	.12		.43	.13														.05		0.73
McKinney	Mouse		T.	T.		.42																								T.			0.42
Manfred	Sheyenne		T.	T.			.09								T.	.48	T.											T.		.35			0.92
Mayville	Red																																
Minot	Mouse				.05		.10								.03		.01														.32		0.51
Minto	Red	T.					.61		.40							.32				.10									.55				1.98
Oriska	Sheyenne						.78								.08	.34	.48			.85									T.				2.53
Park River	Red																																
Pembina	...do			.12	.04		T.			T.			T.			T.	.02			.20										.94			1.32
Power	Sheyenne												.12		.58	.20																	0.78
Pratt	Mouse						.44							.02																.57			1.03
Towner	...do						.21		T.							.09									.09					.46			0.85
University	Red		.02				.29		.08							.07	.02											.06		.35			0.89
Wahpeton	...do																																
Walhalla	Pembina	T.	.01				.12		.04						.07															.58			0.86
Westhope	Mouse																																
Willow City	...do	T.		.13			.18																							.95			1.26
Minnesota.																																	
Albert Lea	Mississippi	.35	.10						T.			.40	.25	.40	.05	.20		.50		1.20								.10	.30	T.			3.85
Alexandria[1]	...do	T.	.24					T.	.50					.80			.40	.30		T.						.04				.80			3.08
Angus	Red			T.			.27			T.			.06			.04	.05	T.									T.		.97				1.29
Bagley	...do		.07	.15				.19					.12				.04										.06			.07			0.71
Baudette	Rainy			.16			.08		.05				.09				.02			.40						.26							1.06
Beardsley	Minnesota			.18					.23				.60	.60		T.	1.10	.07												.20			2.98
Beaulieu	Red																																
Bird Island	Minnesota	.21	.24						.42					.73			.23				.44				T.					.58			2.97
Caledonia[1]	Mississippi	.25		T.					.05	.45			.15		.45	.24	.03	.09	.32		.11				T.	.02	T			1.86	T.		4.02
Campbell[1]	Red	T.	.24		.02			.15	.17	T.	.02			.25		.04	.30	T.												.06			1.25
Cass Lake[1]	Mississippi		.40									T.																					0.40
Collegeville	...do		.17						.01				1.04			.05	.09	.50												.34			2.20
Crookston[1]	Red			T.	.06		.08	T.	.11			T.					.30	T.			.45					T.		.15		.27			1.42
Detroit[1]	...do			T.	T.		.10	.12	.04			T.	.20			.08	T.	T.			T.							T.		.12			0.66
Fairmont (near)	Minnesota	.06		.13				.09					.22			.05	.15	.59											.25	T.	.40			1.95
Faribault	Mississippi	.20	.29					.35					.15			.37	.07												T.		.54			1.97
Farmington	...do	.10	.05				.15	.40				.72	.08			.07	T.	.33												T.	.13			2.03
Fergus Falls	Red	.01		T.			.10	.01	.03			T.	.33	.02	.12	.05			.05								T.		.06				0.78
Fort Ripley[1]	Mississippi							.12				.80				.04	.19													1.16			2.31
Fosston	Red		.02	.02			.06	.07		.07		.38				.13											.05			.15			0.95
Fram	...do			.04			.45		T.	T.						T.	.17	T.												.22			0.88
Glencoe	Mississippi	.28	.12				.25		.34					.35	T.		T.	.34												T.	.24			1.92
Grand Meadow	...do		T.					.18	.02		T.	.46	.07	.03	.17		.83	.07		.26					.05			T.	.03	1.36			3.53
Hallock	Red			.06			.15	.07	.02	.02		.17			1.05				.10									1.00					2.64
Halstad	...do			.05	T.			.31		.04					.02	.50														T.			0.92
Hinckley	St. Croix				.25					.80		.95	.95					.33							.05					.33			3.66
International Falls	Rainy			T.			T.	.52	.03			.48	.17							T.													1.20
Kelliher	Red		T.	.08		T.	.20	T.	.14			.13														T.							0.55
Lake Crystal	Minnesota	.11	.18					T.			T.			.38		.40		.78		2.28								.09		.26			4.48
Leech Lake Dam	Mississippi			.02	.06			.23		.02		.02	.08	.02												.01		.03		.16			0.66
Little Fork	Rainy							.07	.41	.09		.64														.13							1.34
Long Prairie	Mississippi																																
Lynd (2)	Minnesota		.52	.53					.25				.86			.15	.22	.02							.20					.09			2.84
Mankato[1]	...do	.46	.23								.28		.26			.85	.22	.21	.08	1.41										.38			4.40
Mapleplain	Mississippi																																
Milaca	...do												1.42					.63												.75			2.80
Milan	Minnesota		.49						.32				.63		.88	.28	.12			1.04					T.					.27			4.03
Minneapolis	Mississippi		.02				T.	.24	.12				.13		T.	.38	.06								T.	T.			.07	.54			1.56
Montevideo[1]	Minnesota	.40	.23	.51				T.	.35				.84		.18	.24	.55			.94						T.				.31			4.65
Moorhead	Red			T.					.12	T.				.13	.01				1.10						.02				.01				1.39
Mora	St. Croix	.16							.07				1.01					.33							.06					.28			1.91
Morris	Minnesota	.20							.13			.30	.08			.68	.24		.98							.03		T.		.80			3.44
New London	Mississippi	.15							.24				.60		.28	.20	.42								.03				.54				2.46
New Richland	Minnesota	.24	.21					T.	.26			.09	.06		.44		.79			2.63					T.				.11	T.	.37			5.22
New Ulm[1]	...do	.65	.95	T.								.10	.40	T.	T.		.83	T.		2.80										.24			5.97
Osakis	Mississippi		.25					.01	.44	T.			.86			.38	.30									T.				.65			2.89
Park Rapids[1]	...do			T.	.03			.07	.04		T.		.38		.03	T.					T.		T.			.03			.03	.07			0.68
Pine River Dam	...do		.24	.12		.50	.50	T.				T.																		.50			1.86
Pokegama Falls	...do		.45	.27			.79	.04	T.				.10	.50												T.		.05		.16			2.36
Red Lake	Red		T.	T.	.07		T.	.15					.06															.08		.06			0.42
Red Wing[1]	Mississippi			.16					.10	.18		T.	.02	.08		.70	.88	.22								T.				.18			2.52
Redwood Falls	Minnesota		.54	T.					.42				.82		.04	.23	.19			.40										.98			3.62
Reeds Landing[1]	Mississippi		.04	.16					.50	.68			.38			.22	.52	.50								.18				.56			3.74
Rochester[1]	...do	.15							.12				.68	.09	.05		.46	.50	.05	T.						.09				.75			2.94
Roseau	Red		.06				.18				.07		.43				.73				.59									.58			2.64
St. Charles[1]	Mississippi	.21		.42					.05	1.34			.95				.27	1.15	.07							.02				1.20			5.68
St. Cloud	...do	1.49	.18						T.					1.03		T.	.06	.39							T.					.75			3.90
St. Paul	...do		.01				.05	.12			.06		.15		.10	.15	.15								T.	T.			.05	.14			0.98
St. Peter	Minnesota	.23	.64						.07		T.		.45		.18		.57			.48									T.	.41			3.03
Sandy Lake Dam	Mississippi			.23					.09			.30														.02		.01		.87			1.52
State Sanatorium	...do						.39						.53																				0.92
Stillwater[1]	St. Croix	T.	.04	T.					.04	.06			.16	.04	.02	.14	.02													.40			0.92
Taylors Falls	...do																																
Warroad	Rainy			.47		.08		.16			.24				.55				.55											.20			2.25
West Concord	Mississippi	.50	.10				1.00	.03			.25		.18		.40		.75			T.								T.	.02	.40			3.63
Willow River	St. Croix																																
Windom	Des Moines		.22	.04							.10		.20			.22	.35											.23		.50			1.86
Winnebago[1]	Minnesota	T.	.25	T.					.35		.01		.12	T.	.71	.22	1.05	.13		.46	T.							.05		.40			3.75
Winnibigoshish	Mississippi		.02	.08		T.	.19			T.		T.														.07		.04		.13			0.53

TABLE 2.—*Daily precipitation for August, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota—Cont'd.																																	
Winona	Mississippi		.05	.29					.11	.11		.32	.25		.01	.32		1.02	.13		T.		T.		T.	.04			.14	1.45			4.24
Worthington‖	Des Moines		.67	.17											.22	.03	.22	.20												.05	.35		1.91
Zumbrota	Mississippi		.10					.10	.20			T.	.30	.08	.81			1.02								.03				.10	.30		3.04
South Dakota.																																	
Milbank	Minnesota		.56						.44					.67		.07	.38	.22			.24					.21					.59		3.38
Wisconsin.																																	
Antigo	Wisconsin	.31		.32					T.				T.	T.	T.	T.		.20						T.	T.	1.99					.99		3.81
Barron	Chippewa	.12			.02			T.	.08					.35		T.		.26							.10						.87		1.80
Beloit	Rock	.10		.81											.03	1.12				.30		.48		1.11		.26					.30		4.48
Big St. Germain Dam	Wisconsin	.30	1.05					.03		T.				T.				.23							.48	.15					1.60		3.84
Brodhead	Rock	.10		.35											T.	.72	.07		.36		.73					.61				.86			3.80
Burnett	....do	T.		.09					T.	.10						.80	.62		.05		.10		T.	.45		.65				T.	.47		3.34
Darlington	....do													.40		.60					.80					1.25					.40		3.45
Deerskin Dam	Wisconsin			1.52	.02													.13				T.			T.	.42					1.00		3.09
Delavan	Rock	.05		.30											.01	.53		T.	.13		.27		1.92		.73					.23			4.17
Dodgeville	....do																																
Downing	Chippewa								T.					.35				.58							T.					T.	.60		1.53
Eau Claire	....do								.34					T.		T.		.88						T.	.23	.06				T.	1.29		2.80
Grand Rapids‖	Wisconsin	.30	T.						T.	.29					.38		.54		.14		.32			.02		.82					.97	.30	4.08
Grantsburg	St. Croix								.18					1.03				.60							.15	T.					.85		2.81
Hancock	Wisconsin	.25							.30	.35				.05	.55	T.	T.	T.			.75			.13		.15					.93		3.46
Hatfield	Black	.22	.03	.01					.21	.12	.09				.10	.09		.64	.02				.47			.15					1.51		3.66
Hayward	St. Croix			.40				.18	T.	T.				.42				.25							.64						.60		2.49
Hillsboro	Wisconsin	T.							.16				T.	T.	1.10	.15	T.	.05			T.		.46		T.	T.				T.	1.20		3.12
Koepenick	....do			.37				T.										.42							1.15	.61					.75		3.30
Lac du Flambeau	Chippewa		.23	T.					.03					T.				.05							.59	.06					1.46		2.42
LaCrosse	Mississippi	.02	T.	.02				.08	1.95	.02		T.	T.	T.	.86	.16	T.	.14	.01						.03	.09				.62	.99		4.99
Lake Mills	Rock	.06		.12										T.	.02	1.38	.06		11		.27			1.24		1.72					.23		5.31
Lancaster	Mississippi	.12												.03	.21	.52			.48		.09					.25			T.		.74		2.44
Long Lake	Wisconsin	.05	.34		.02									T.				.84							.63	.38					1.05		3.31
Madison	Rock	.11		.03						T.			T.	.61	.08	.86	T.	.02	.15		.12		.15	3.00		1.55				.01	.47	T.	6.56
Mather‖	Wisconsin	.11		.25						1.02	T.				.17	T.	.04	.02	.10		.05					.49				T.	1.39	.03	3.67
Mauston	....do	.12							.11	.25					.58	.90			.08		.52			1.20							1.05		4.81
Meadow Valley	....do	.22		.04					.18	.90				T.	.09	.06		.20		.40				T.	T.	.39				T.	1.21		3.69
Medford	Black	.22		.35					.20									.70							1.48	.78					1.45		5.18
Merrill	Wisconsin			.28					.02	T.				T.		T.		.74							1.24	.39					.80		3.47
Minocqua	....do	.17		.44	.08			.03										.18								.67					1.27		2.84
Mondovi	Mississippi	.34	.15						.45	.06				.18		.10	.01	1.85	.01						T.	.11			T.	.03	1.05		4.34
Mount Horeb	Rock	.10											T.	.09	.04	.70	.03		.14		1.25			1.25		2.22				T.	.63		6.45
Muscoda‖	Wisconsin	.30												T.	.96	.04	.12		.10	T.	2.14	.25		.08		.60	T.				1.58	.08	6.25
Neillsville	Black	.30		.70						.21								1.43						1.42		.45					.75		5.26
New Richmond	St. Croix								.04					.09		.04	.10	.03												T.	.56		0.86
Osceola	....do	T.		.08									T.		.05	.05		.43							.63						.41		1.05
Park Falls	Chippewa	.42		.05					.20					.19				.15								.73					1.40		3.14
Portage	Wisconsin	.15								T.					.84	.35				.45	.08			.27		.94					.80		3.98
Prairie du Chien‖	Mississippi	.10							.04				.10		.58	.08	.08		.10		.06	.04				.24					.52	.16	2.10
Prentice	Chippewa		.31					.02	T.	.03				T.				.34							1.03	.04					1.26		3.03
Rhinelander	Wisconsin	.26		.51	.01									T.				.37							.46	.39					1.40		3.40
Sauk City	....do																																
Shullsburg	Mississippi	.11												.34	.03	.56			.61		.14					1.77					.34		3.90
Solon Springs	St. Croix			.30				.50				.85						.30								T.		T.		.25			2.20
Spooner	....do		T.	.08					.04	.03				.20	.98										.12	T.					.50		1.95
Stanley	Chippewa	.28		.30	T.		T.		.49		.01			.05		T.		.65							.05	.31					2.00		4.14
Stevens Point	Wisconsin	.92	T.	T.					.20	.60						.75									.43	.39					.99		4.28
Sugar Camp Dam	....do	.28		.43								T.		.02				.22								.33					1.22		2.50
Twin Lakes Dam	....do	.10		1.04	.04													.10							T.	.41					1.20		2.89
Valley Junction	....do	.43		T.					.28	.83	.23			.63	1.12	.19		.49	.21		T.		T.	T.	T.	*					1.68		6.09
Viroqua	Mississippi	.17							T.	.58				.01	.81	.09		.05	.05		.44					.11				.03	1.76		4.10
Vudesare	Wisconsin	T.		.96		T.												T.											T.				0.96
Watertown‖	Rock	T.			.52										.07	.15	1.20		.18		.11	.30		.55		1.12	.34				.05	.35	4.94
Waukesha	Fox			.50					.14						.09	.02	.85		.05		.03			*		.85					.18		2.80
Wausau	Wisconsin	.26		1.87					.07					T.				.70			.04					1.35					1.10		5.39
Weyerhaeuser	Chippewa			.33					.21					.26	T.			.24							.43	.05					.92		2.44
Whitehall	Mississippi	T.	T.	.10					.75	T.						T.		.75						.30		T.					1.50		2.40
Iowa.																																	
Albia‖	Des Moines			.12			.03											.02	.04			.28										.05	.01	0.55
Algona	....do		.41	.31										.20		.21	.15	.97								T.				T.	.18	.17		2.60
Alta‖	Raccoon			.90								.05		.12	.06	.64	.24	.30	.35							.03					.10	.29		3.08
Amana	Iowa	T.		.32											T.	.65		1.65	.77		3.11			T.		.67					.01	.32		7.50
Ames	Skunk			.29										.13	.12	1.00		.03								.17				.40	.14	.47		2.75
Baxter	....do			1.30										.01	.02	.82		.01			T.					.50					.34	.13	T.	3.13
Belle Plaine	Iowa			.46											.03	.60		1.40		.01	.08					.47					.08	.13		3.26
Belmond	....do		T.	.44										.27	.94	.17	T.	.60					T.			.13				T.	.08	.95		3.58
Bloomfield	Mississippi																	.85		T.	2.87													3.72
Bonaparte	Des Moines			T.												.05		.70				.80				.05					.16			1.76
Boone‖	....do			.17										.14	.13		.89	.06	.30		T.					.12				.38	.78	T.	2.97
Britt	Iowa		.28	.08								T.		.29	.03	.15	.04	1.09	T.		.01					.08			.02	.06	.27		2.40
Buckingham	Cedar			1.02												.28		1.66			.19					.51			.02		.65		4.33
Burlington‖	Mississippi							.01											T.			.40									T.	.02	0.43
Carroll‖	Raccoon		.64									.96	1.43	.05	2.36	.43	.12								.12				.70	1.11			7.92
Cedar Rapids‖	Cedar		.12	.25													.61		1.78		T.	2.36			T.	.60				T.	.38	T.	6.10
Charles City	....do	.04	.20	.06					.27			.34		.40	.28	.23		1.46			.99					.15				T.	.39	.93		5.84
Clear Lake	....do			1.80											.35						.10										.98		3.23
Clinton	Mississippi			.32												.65		*	.19		.39					.75					.11		2.41
Columbus Junction	Iowa			.15											T.	2.48	.25	.75	.25		.35					.34				T.	.25		4.82
Davenport	Mississippi			.13											T.	.86		.73	1.06		.81					.09					.62	.01	4.31
Decorah	....do	.20						T.	.10		T.	.18	1.00	.50				.50													1.60			4.08
Delaware	....do	.10		.21										.30	.02	.14					.43					.20					.50		2.10
Des Moines	Des Moines	T.		.70										.25	.02	.38	T.	T.			T.					.18				.61	.18	.05	.02	2.40
De Soto	Raccoon			.41										.92	.27	.11		.04								T.				T.	1.53	.12		3.40
Dubuque	Mississippi	.01		.04										.03	.02	.10	T.	.60	.91		.91				T.	.90					T.	.44		3.96
Earlham	Raccoon		.74										1.55													T.				T.	1.68	.11		4.08
Elkader	Mississippi	.05		.08					T.					.10	1.25	.16		.05	.08		.20					.20					.30	.90		3.47
Elma	Wapsipinicon	.08	.08	.03					.10		.01	.05	.05			.18	.01	1.00	.02		.67					.10					.40	1.62		4.40
Estherville‖	Des Moines			.11				T.		.05				.20	.22	T.	.30	.10	.17												.05	.40		1.60
Fairfield	Skunk			.19										T.		T.	T.	.18			2.06	.85				.14						.08	T.	3.47
Fayette	Mississippi	.28	T.	.21								T.			.93	.25		.80	.20		.55					.06				.05	1.05		4.38
Forest City‖	Cedar		.12	.80								T.		.35	.16		.10	.67	T.							.05			.17		.33		2.75
Fort Dodge‖	Des Moines			.35										.36	1.64	.15	.63	.62	.17							.15				.24	.90		5.21
Fort Madison	Mississippi			T.				.12								T.		.21			2.27				T.	.05					T.		2.65
Gilman	Iowa			.19											T.	.31		.25	T.		.03				T.	.60					.11	.45	T.	1.94
Grand Meadow	Mississippi	.19			.01					.05					.48	.37		.24	.09		.15					.03					02	1.40		3.03
Greene	Cedar		.23	.65								.38			.55	.31		1.41			.66					.15				T.	.15	1.29		5.78
Grinnell	Iowa			.30												.21		1.00	.03							.33				.15	.02	.01		2.05

TABLE 2.—*Daily precipitation for August, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Iowa—Cont'd.																																	
Grundy Center	Cedar			.73								.02				1.03		2.10	.03											.27	.74		4.92
Guthrie Center	Raccoon		.12	.68								T.		1.19	.68		1.22							T.	T.	.18	.25			.22	1.24	.33	T.	6.11
Hampton	Cedar	.08	1.45									.06	.03	.22		.50	.20	.40								.16				.05	2.15			5.40
Humboldt	Des Moines			.56										.60	.13	.35	.04	1.08								.12				.28	.70			3.86
Independence	Wapsipinicon	.16		.26												.18		.20	.02		.79			.02		.34				.04	.35			2.36
Indianola	Des Moines			.50										.06	.04	.05	.17	.50			.02					.01			T.	.90	.03			2.28
Iowa City[1]	Iowa			.85											T.		1.18		1.04			.86				.80					.25			4.98
Iowa Falls[1]	do			1.12									.09		1.03		.46	.51	1.55			T.				.14				.08	1.03	T.		6.01
Jefferson	Raccoon																																	
Keokuk	Mississippi			.04			.02	.10								T.		.09			.67					T.					T.	T.		0.92
Keosauqua[1]	Des Moines			.36				.02									T.		.43			2.57				.10					.02	T.		3.50
Knoxville	do			.90										T.	T.	1.45	T.	.03	T.							T.				.35	T.	T.		2.73
Lacona	do			.48									.01	.01		.54	.01	.49												.54	.01	.01		2.10
Le Claire[1]	Mississippi		.10	T.												T.	1.75		.59	.12	.03	.44								.01	.28		3.62
Marshalltown[1]	Iowa			.49											T.		.30	1.56	.02		T.					.33				.09	.59	T.		3.78
Mason City	Cedar		.25	2.48										.11	.28	.09		.48			.60					.05				.05	.45			4.84
Mount Pleasant	Skunk			.52												.37		.21	.03		1.27	.03				.22				T.	.02			2.67
Muscatine[1]	Mississippi			.40												T.	1.17		.18	.15		.12				.38					.10	.67		3.17
New Hampton	Wapsipinicon	.23	.03	.08										T.	.57	.08		1.35	.05		1.01					.04				.05	1.32			4.81
Newton	Skunk																																	
Northwood	Cedar		.06	.12					T.			.02		.66	.10	.40		.67			1.15				.01	.03			.11	.02	.40			3.75
Olin	Wapsipinicon			.20												.25			1.46		1.11			T.		1.12			T.	.53				4.67
Osage	Cedar		.17												.11	.50		1.23			1.78								T.	T.	1.26			5.05
Oskaloosa	Des Moines	.53					.02								T.	.31					.43				.08				T.		.03			1.42
Ottumwa	do			.22			T.							T.				.63			2.46					.12					.02	.20		3.65
Pella	do			.63										T.	.03	.42		.01	T.	T.	T.					.02				.23	.08			1.43
Perry	Raccoon	.20	.04	.85										.70	.22	.60		.31	.03							.25			.12	.83	.45			4.60
Plover	Des Moines			.35										.20		.60	.05	1.72						T.	T.	T.			T.		.20			3.12
Pocahontas	do		.31	.24										.32	.07	.57		1.12								.13			.02		.31			3.10
Ridgeway	Mississippi	.09	.02					.13	.02			.28		.12	.08	.16	.02	2.00	.07		.17				.06	T.				.25	2.16			5.63
Rockwell City	Raccoon			1.00									1.05	.50		.45										.45			.57	.50				4.52
Sac City	do		.37	.38										.64		.52	.02	.47								.18			.50	.05	.41			3.54
St. Charles	Des Moines			1.37												T.		.11								.01				.90	.05			2.44
Sigourney	Skunk			.32											.03	.15		.62			.10					.10				T.	.07			1.40
Stockport	do		.22					.01								.12		.35			1.19	.35				.12				T.	.07			2.43
Storm Lake	Raccoon	.26	T.	.32								T.			.16	.47	.12	.84			.15	.13				.08			.13					2.66
Stuart	do			.62										1.01	.67			.28	T.										.18	1.33	.32	T.		4.41
Tipton	Cedar															.51		1.83	.67							2.00					.43			5.44
Toledo	Iowa			.28												.30		.60	.20		T.					.87				.18	.42			2.82
Wapello	do			.13												2.33		.57			T.										.30			3.33
Washington	Skunk		.11													4.22		.45	.35		2.08					.14					.14			8.49
Waterloo[1]	Cedar			1.26									.03	T.	.04		.34	.04	1.27		.47				T.	.10				.05	.47	.04		4.11
Waukee	Raccoon			.44										.60	.18	.18		.05	.04		T.					T.			.02	1.14	.10	.03		2.78
Waverly	Cedar		T.	.68								.04			.10	.20		1.01	.11		.94					.01				.38	1.04			4.51
Webster City	Des Moines			.66										.04	.16	.55	.05	.78			.08					.20			.20	.21	.82			3.69
West Bend	do		T.	.43										.16	.02	.42	.02	1.32								.02				T.	.22			2.61
Whitton	Iowa													T.		1.45		.50			.26									.58	.60			3.39
Winterset	Des Moines			.81						T.				.83	.02	.05		.11			T.			T.		T.			1.36	.06	T.		3.24
Missouri.																																	
Gorin	Mississippi							.09								.03		.35				1.56												2.03
Hannibal	do			.12			.12	.38		T.						.07		.05	.36		.01	.53			T.						T.	T.		1.64
Louisiana	do			.15			.02	1.10		.02									.32			.24									T.			1.85
Mexico[1]	do			.03				1.46		.04									.09			.24										T.		1.96
Steffenville	do			T.			T.	.16	T.	T.						.13	T.	T.				2.20			T.	T.					T.	.24		2.73
Sublett	do						T.									T.		.50										2.00						2.50
Warrenton[1]	do			.20	.53			.68	.01	.03									.61	.26		.04										.12		2.48
Indiana.																																	
Collegeville	Iroquois	T.						.15		.02					.60	.80	.79	.69					1.25	T.	.10						1.0		5.40
Knox	Kankakee	T.		T.				T.		.66						.32	.33	.76		.15			1.64		.11					T.	2.22		6.19
Laporte	do	.20								.13					.14	.33		.05		.27			1.13							.80	.48			3.53
Plymouth	do	.02						T.							T.	.28	.02	.32		.08			1.29	.12	T.						1.55		3.68
Illinois.																																	
Aledo	Mississippi															.95	.68	.73	.02		.16					.10				.09				2.73
Alexander	Illinois						T.	.41		T.						T.	.67	2.11	.04			.24				T.						.75		3.62
Antioch	do			T.											T.		.63		T.		.90				1.50	.50				.08				3.61
Astoria	do									.05							.06	T.	.80		T.	T.			T.	T.						.25		1.16
Aurora	do	.04	.52	.07						T.						T.	.93		.13		.98			1.37			T.			T.				4.04
Bement	Mississippi							.27									1.89		.06					.36		.02						.02		2.62
Benton	do			T.				.25		.28									.20															0.73
Bloomington	Illinois			T.				.05											.08		.03			.13								.41		0.70
Cairo	Mississippi			.21			T.	.02		.15												T.		1.66		.79	.04					.03		2.90
Carbondale	do			.15	.05			.20		.15										.04				1.38		.04						.10		2.11
Carlinville	Illinois							.35		T.						.02	T.	.01	.34			.19				T.						.46		1.37
Carlyle	Mississippi							.80								.20	.35			.25		.40		1.60								.20		2.80
Chester[1]	do			.12	1.14			.58		T.	.24							T.		.70			.44	1.24			T.							4.46
Clinton	Illinois							.24		T.						T.	1.63	T.	.12			.01		.14	T.							.27		2.41
Contsburg	Mississippi							T.										.05	.36															0.41
Cobden	do			T.				T.		.47									T.			T.		1.05			.37							1.89
Dakota	do	.20														.52	.04		.25		2.05					1.00								4.06
Decatur[1]	Illinois							.50		T.							1.13		.78			.24		.6		.10				1.03				3.81
Dixon[1]	Mississippi	.03	.21	.49	.05												1.55		.08	.06	.55	.02				.02						.08		3.14
Du Quoin	do			.24				.58		.18						T.			T.			T.		1.24		.35								2.59
Dwight	Illinois	T.		.01				.01		T.							2.90	.03	.50		.05			1.15							T.	.01		4.66
East St. Louis[1]	Mississippi			.22	.11			.83	T.								.31			.23			.02											1.72
Edwardsville	do			.19				.80								.28			.70					.41								.04		2.42
Elgin	Illinois	.06														.94			.08		.57			1.21		.01					T.			2.87
Galva[1]	do			.17				.05								.26	.11	.01	.05		.10					.04					T.	.01		0.80
Grafton[1]	Mississippi			.12	.04			.70											.48													1.74		3.08
Greenville	do						.04	.80									.02	.50	.26			.48		1.10		.15								3.35
Griggsville	Illinois			T.				.42									T.		.28			.15				T.						T.		0.85
Halfway	Mississippi			.05				.41		.11							T.		1.80					1.90		.12	.11					T.		4.50
Havana	Illinois							.09		.03									.26													.20		0.58
Henry	do			.57				.06								.28	.70	T.	.10		.06													1.77
Hillsboro[1]	Mississippi								.75										2.02			.55	.65	.92									.30		5.19
Joliet	Illinois	.08		T.						T.						.82	.51		.05		.81			.90										3.17
Kishwaukee	Mississippi	.20		.28												.73			.11		1.09					.91				.26				3.58
La Grange	Illinois																																	
La Harpe	do			.05				.18		T.						T.		T.				.15													0.38
Lanark	Mississippi	.04	T.	.04											T.	.27	.05	T.	1.22	.45						.71				T.	.48				3.26
La Salle	Illinois	T.		.22				.01								2.62	.69	T.	.15		.02			.03	T.	T.					T.	T.		3.74
Lincoln	do							.19		T.						.05	.25	.05	.15		T.	T.		T.	T.	T.					T.	.10		0.79
Loami	do						T.	.47		T.						T.		.15	T.			.08			T.	T.						T.			0.70
Martinton[1]	do									T.					T.	1.03		.53	.07		.47		2.30								1.40	T.		5.80
Mascoutah	Mississippi			.16			.02	.55		.05						T.	T.		.18			.11		3.90		.11								5.08

TABLE 2.—*Daily precipitation for August, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Illinois—Cont'd.																																	
Minonk	Illinois			.05				.07		T.						T.	1.68	.30	.06		T.			.20								.10	2.46
Monmouth	Mississippi																																
Morrison	do			.42											T.	.67	.45		.20		.33					.27			T.		.10		2.44
Morrisonville	Illinois						T.	.28									.05		.39			1.41		.06		T.							2.19
Mt. Vernon	Mississippi							.45			.10							.71					.03	.20			.58						2.07
Oregon	do	.15	.15	.30													.50		.20		.87					.15					.22		2.54
Ottawa	Illinois		.05	.13												3.15		.06		.22				.30									3.91
Pana	Mississippi							.12		.02							.40	1.37	2.68			1.87		.18		T.						.07	6.71
Peoria	Illinois			.03			T.	.08								.04		.51	.01		.01					T.					T.	T.	0.68
Pontiac	do							.30		T.							2.33	1.08	.10		T.			.54		.01					T.	.03	4.39
Riley	Mississippi	.08		.13											T.	.87			.14		.59			1.60		.21				T.	.06		3.68
Rockford	do	.30	.13	.20	.09											T.	.74		.22	T.	.95			.28		.45	.09				.04	.17	3.66
Rushville	Illinois						T.	.18		T.						.15		1.28			.12			T.								.31	2.04
St. Charles	do	.22		.06						T.					T.		.93		.15		.68			.95		T.					T.		2.99
St. Peter	Mississippi			T.			T.	.50		T.							.55	T.	T.			T.		T.		.85							1.90
Sparta	do			.25				.58		.08							.09		.02			.40		2.38		.06						.20	4.06
Springfield	Illinois						.06	.28		T.						T.		T.	.03		T.	.25	.03		T.	T.					.11	.02	0.78
Streator	do				.04			.08			T.						4.52		.21	.10	.02			.41	T.								5.38
Sullivan	Mississippi							.45		T.							1.83		.37				29	1.11									4.05
Sycamore	do		.20		.50											.18	.78		.07		1.24			1.25		T.							4.22
Tiskilwa	Illinois			.09				.06		T.						.39	.76		.22		.10				.01	.02					.01	.01	1.67
Walnut	Mississippi			.86				T.								1.24	1.53		.32		.15				T.	.02					T.		4.12
Warsaw	do							.08										.07			.68												0.83
White Hall	Illinois			T.			.01	.44		T.									.15			.07				T.						.45	1.12
Windsor	Mississippi							.20		.02							1.67		.70			03		.90		.03							3.55
Winnebago	do	.32		.20											T.	.43			.19		1.45			T.		.73					.38		3.70
Yorkville	Illinois		.40	.08												.30	.80		.10		1.12			1.10							T.		3.90
Zion	Mississippi			T.												.57		.45	1.82		T.					.99				.77			4.60

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.																	
	Bottineau.‡‖		Devils Lake.		Lisbon.‡‖		Minot.‡‖		Pembina.‡‖		Collegeville.		Crookston.‡‖		Grand Meadow.		Montevideo.‡‖		Moorhead.		New Ulm.‡‖		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min
1...	79	55	77	52	76	54	88	54	74	43	85	57	81	52	95	65	83	57	82	53	90	63	82	62	85	64	80	55
2...	76	52	83	57	88	50	86	57	81	52	90	63	79	59	92	64	92	61	88	57	91	64	90	58	84	65	84	60
3...	68	52	70	51	80	54	73	55	72	50	89	63	73	55	84	65	82	57	74	56	84	64	70	60	82	66	70	59
4...	75	45	77	44	80	47	83	47	79	48	73	54	71	49	82	55	78	53	76	48	82	56	69	54	75	59	69	52
5...	83	51	83	49	88	43	88	55	82	46	82	52	80	53	86	40	86	49	84	45	87	48	76	52	82	52	81	48
6...	78	58	82	61	89	55	79	55	80	50	88	58	87	55	81	50	83	55	87	60	92	53	87	57	88	56	80	48
7...	75	47	80	55	87	61	79	51	74	52	86	66	82	62	80	58	86	59	84	63	90	61	78	61	84	63	75	60
8...	63	47	70	51	78	50	69	52	71	50	82	62	75	54	87	62	83	57	76	52	88	61	78	56	79	58	77	55
9...	78	45	76	53	81	54	80	43	72	48	78	57	75	58	79	54	79	55	78	56	79	56	73	53	76	57	72	54
10...	86	44	86	43	89	37	90	46	82	46	83	55	83	48	86	51	86	49	87	42	88	41	83	54	84	55	81	54
11...	93	55	94	59	92	46	95	66	90	50	89	58	90	54	87	58	92	57	92	54	94	54	91	56	89	59	86	53
12...	80	62	83	56	88	67	79	57	88	52	91	64	85	62	88	61	93	66	90	65	92	63	88	59	89	64	86	62
13...	80	50	78	49	85	56	76	49	82	49	86	61	78	55	80	64	80	62	82	58	82	68	86	54	76	65	82	63
14...	72	55	69	50	75	55	72	51	74	50	78	58	77	50	82	63	74	60	78	56	83	56	80	56	78	62	76	50
15...	79	56	76	57	93	58	76	53	78	48	76	56	83	61	69	64	83	61	82	58	84	65	72	55	75	65	77	57
16...	70	43	64	49	75	53	68	47	62	40	78	65	71	56	90	65	79	63	74	55	85	63	82	62	86	66	80	61
17...	73	36	69	44	79	50	72	43	72	46	77	56	71	51	77	60	75	57	75	52	71	62	79	52	67	59	80	49
18...	82	43	78	43	81	40	83	35	85	46	76	52	77	46	81	56	79	53	81	45	82	52	79	46	80	53	78	44
19...	92	50	88	50	88	50	94	43	86	50	83	57	87	53	82	53	83	55	86	51	85	54	84	41	81	54	81	52
20...	93	55	91	60	93	58	95	53	82	50	88	61	91	59	87	59	88	58	90	58	90	59	90	49	90	63	90	56
21...	69	54	83	52	90	51	79	58	68	46	84	61	85	55	91	62	92	63	88	57	94	65	82	53	83	68	84	58
22...	78	46	74	48	60	50	70	44	74	40	81	63	75	53	94	70	71	61	64	46	85	69	76	55	83	62	73	58
23...	68	45	66	48	63	44	67	46	60	43	66	54	62	48	86	58	68	50	60	44	70	57	63	47	69	57	65	51
24...	61	45	58	43	64	45	58	48	55	39	62	51	60	45	91	68	65	51	63	47	65	57	60	53	69	56	60	50
25...	68	34	66	38	72	45	68	38	64	38	64	49	67	44	70	51	69	48	69	48	68	50	70	48	67	52	63	47
26...	79	28	75	44	83	38	79	40	74	37	75	46	76	39	75	43	79	44	80	42	79	43	76	52	77	47	78	45
27...	67	30	61	44	76	37	68	45	62	40	74	56	59	45	76	49	78	49	74	44	80	49	68	39	74	50	69	44
28...	77	46	74	41	76	46	77	42	70	40	75	51	75	47	75	52	74	54	79	48	73	56	70	50	78	60	73	44
29...	75	50	76	57	86	58	88	44	75	50	78	58	81	49	79	61	82	58	84	61	82	61	74	46	80	64	77	55
30...	68	45	64	43	76	49	68	45	63	49	73	55	65	54	72	58	75	54	71	46	73	57	82	50	73	58	73	55
31...	67	33	69	36	70	31	71	34	70	32	74	51	70	38	77	46	74	42	78	36	73	45	74	39	74	47	74	43
Mns	75.9	47.0	75.5	49.5	80.7	49.4	78.0	48.3	74.2	45.8	79.5	57.1	76.5	51.9	82.6	57.6	80.4	55.4	79.2	51.7	82.6	57.3	77.8	52.4	79.3	78.9	76.6	53.0

Date.	Wisconsin.														Iowa.													
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausaw.		Algona.		Cedar Rapids.‡‖		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	90	62	85	62	91	64	86	63	85	60	80	57	80	51	94	66	96	62	94	66	90	68	96	69	93	69	88	68
2...	85	56	78	65	88	67	83	62	84	60	85	58	79	56	89	67	95	68	93	64	91	71	90	71	90	68	85	72
3...	91	63	84	65	87	68	86	65	86	68	79	60	83	58	83	73	88	68	85	64	90	70	86	67	89	71	88	71
4...	80	54	76	52	77	58	74	61	79	62	70	50	80	57	77	56	82	63	79	53	82	63	78	61	80	62	80	64
5...	82	46	82	45	81	43	78	56	79	43	73	43	75	47	81	48	84	54	82	46	82	57	80	54	81	53	81	56
6...	86	44	86	48	86	48	82	58	85	44	84	44	81	44	85	52	88	50	86	48	84	57	80	54	85	50	80	58
7...	84	59	87	58	90	58	82	62	86	50	84	61	84	58	85	56	90	55	86	54	85	67	86	57	87	65	77	63
8...	89	61	81	56	83	60	85	62	85	58	79	54	84	59	87	63	88	65	86	60	83	64	81	65	88	66	79	61
9...	87	61	78	56	76	61	79	63	75	61	76	51	77	59	77	56	82	66	79	57	82	64	80	62	81	64	82	65
10...	84	59	84	54	81	56	78	59	78	56	80	48	77	55	85	54	86	56	84	51	84	59	85	54	83	59	82	57
11...	88	49	88	52	87	54	85	58	88	50	88	53	85	49	89	62	91	58	84	58	87	63	87	62	88	56	83	62
12...	92	56	89	52	90	63	88	62	88	55	91	62	86	59	89	64	91	60	87	61	86	64	88	62	88	65	85	59
13...	86	56	84	66	82	68	82	64	84	64	77	61	85	64	77	67	86	61	81	66	81	68	80	67	83	65	85	65
14...	80	61	80	61	76	66	79	65	73	65	78	58	76	64	79	68	92	68	81	65	89	71	88	68	84	67	88	67
15...	88	62	68	62	71	65	83	64	72	63	74	55	71	53	79	66	86	62	77	66	87	67	85	66	85	67	87	70
16...	86	64	85	65	85	68	84	65	85	64	82	64	81	60	88	65	99	65	90	68	89	68	96	69	88	69	95	71
17...	87	61	81	60	72	65	81	66	80	66	68	55	83	61	79	63	81	68	72	64	84	70	76	69	83	68	91	71
18...	76	61	79	53	79	58	76	62	78	61	75	46	78	52	78	56	78	67	77	60	78	68	77	67	77	63	79	71
19...	83	48	81	52	83	53	81	56	80	49	80	48	79	50	82	56	85	64	81	54	84	61	84	67	83	58	85	63
20...	83	61	85	62	80	64	80	61	76	61	86	59	84	53	89	62	81	65	87	58	79	67	89	70	75	64	87	66
21...	88	64	84	65	90	65	85	63	85	62	85	62	85	61	90	67	89	65	89	64	88	66	94	69	87	64	89	67
22...	92	67	86	68	91	71	91	67	90	72	72	61	89	68	93	68	94	57	91	71	94	72	97	73	92	71	93	72
23...	88	64	81	58	79	64	80	63	85	64	70	52	86	62	78	58	94	74	80	63	84	72	90	70	83	72	90	77
24...	90	72	78	60	94	72	91	72	90	68	66	57	84	66	86	66	95	75	94	62	90	75	97	67	93	73	92	77
25...	77	53	69	51	72	49	76	53	84	53	61	46	80	56	67	50	66	50	65	48	82	55	68	52	80	51	86	63
26...	74	42	74	43	76	45	70	50	72	46	75	50	70	42	75	42	74	48	73	43	73	50	76	45	73	48	74	48
27...	76	46	73	48	76	51	73	52	74	50	65	40	73	44	77	47	77	48	75	49	76	52	78	53	75	54	76	50
28...	78	52	72	54	78	53	74	54	74	48	73	54	74	54	74	55	81	51	77	55	79	59	83	56	77	56	82	55
29...	77	59	75	60	76	64	75	61	74	49	78	58	72	55	75	62	78	61	71	64	82	62	79	63	74	64	85	60
30...	80	63	69	61	74	55	75	61	72	62	70	59	73	59	73	59	74	54	72	53	76	65	77	62	76	60	82	71
31...	71	51	75	46	74	49	71	57	72	46	71	54	74	44	78	45	75	54	73	48	74	58	72	56	74	53	72	63
Mns	83.8	57.3	79.9	56.8	81.5	59.4	80.4	60.9	80.6	57.3	76.6	54.2	79.6	55.6	81.9	59.3	85.4	60.7	81.4	58.2	83.7	64.2	84.0	62.8	83.1	62.4	84.2	64.6

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mt. Vernon.ff		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	88	64	84	51	86	68	88	63	91	64	.....	.....	86	61	89	63	89	64	90	62
2	83	69	88	64	85	70	84	66	92	67	.....	.....	87	62	89	67	87	68	89	65
3	86	69	90	61	85	68	87	67	87	69	.....	.....	83	65	88	69	87	70	91	64
4	79	61	83	65	86	71	86	65	81	64	.....	.....	80	67	80	61	82	65	89	59
5	77	55	81	48	83	66	85	60	82	53	.....	.....	88	57	81	52	82	59	84	49
6	77	57	83	49	82	67	89	61	85	54	.....	.....	87	60	83	52	83	60	89	50
7	74	61	77	57	84	68	69	62	78	62	.....	.....	73	61	77	60	71	62	86	60
8	78	57	89	50	82	64	78	50	85	61	.....	.....	83	58	81	57	81	60	88	58
9	82	66	81	61	79	68	78	62	85	64	.....	.....	81	58	83	61	83	66	85	60
10	80	56	80	61	85	64	82	58	83	59	.....	.....	85	62	83	54	82	60	86	55
11	82	58	85	51	83	66	80	60	88	56	.....	.....	85	55	86	55	82	63	91	55
12	83	58	87	55	84	65	85	66	88	60	.....	.....	85	55	87	55	85	60	93	60
13	84	62	86	55	88	64	88	62	84	61	.....	.....	87	57	84	57	86	62	90	58
14	87	68	88	55	90	70	89	68	89	65	.....	.....	92	65	89	64	89	68	84	58
15	85	70	93	60	90	71	92	68	92	65	.....	.....	95	65	90	66	90	68	95	60
16	93	71	85	60	89	72	92	69	87	68	.....	.....	92	69	93	71	93	73	88	65
17	90	80	86	64	92	74	88	70	84	68	.....	.....	92	69	90	72	92	72	86	66
18	79	70	76	68	92	75	78	72	79	63	.....	.....	85	69	80	64	78	67	81	62
19	84	65	82	54	83	73	85	64	83	57	.....	.....	85	64	84	57	83	61	86	53
20	87	64	80	55	89	71	87	65	80	65	.....	.....	90	64	83	64	87	66	82	60
21	88	66	89	60	89	72	88	68	88	68	.....	.....	91	66	89	66	88	69	88	63
22	94	73	85	65	91	72	92	67	92	68	.....	.....	95	66	94	67	93	67	94	68
23	92	79	89	62	82	66	84	67	88	67	.....	.....	86	68	89	69	87	71	86	67
24	90	77	84	72	86	73	87	71	85	73	.....	.....	88	68	84	71	85	72	92	74
25	83	54	80	64	85	64	78	60	81	52	.....	.....	83	71	78	58	80	57	76	48
26	72	47	70	45	71	58	73	50	73	48	.....	.....	74	58	73	41	71	49	75	44
27	75	47	71	44	76	57	78	52	76	51	.....	.....	80	49	78	43	76	51	89	46
28	80	54	80	45	83	61	81	55	79	54	.....	.....	83	51	83	48	81	53	.....	.....
29	86	60	83	55	89	67	87	60	83	59	.....	.....	90	53	85	56	85	56	80	60
30	90	68	90	57	90	68	92	64	85	64	.....	.....	93	61	91	65	93	66	79	62
31	76	63	75	63	88	71	83	68	77	61	.....	.....	90	62	76	63	80	64	75	54
Means	83.4	63.2	83.2	57.3	85.4	67.9	84.3	63.2	84.2	61.6	.....	.....	86.6	61.8	84.5	60.0	84.2	63.5	86.0a	58.8a

Climatological Data for August, 1910.

DISTRICT No. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

GENERAL SUMMARY.

The mean temperature for the month was below the normal in practically all parts of the drainage area, the deficiency being caused in a great measure by the unusually cool weather accompanying an area of high atmospheric pressure that crossed the district between the 24th and 27th. The precipitation was excessive in numerous localities in the lower part of the district, principally between Kansas City and the confluence of the Platte and Missouri rivers, and was due to the formation of storms of limited extent in the general atmospheric depression between high barometric areas over the country to the east of the Mississippi River, and over the northern part of the Rocky Mountain slope. In the western three-quarters of the district the precipitation was quite normal, but the amount for the season is still deficient in most of this territory on account of the very light rainfall during June and July. It was, however, sufficient in August to give decided relief to the sections in the western part of the Dakotas where prairie fires had prevailed, and to check, or cause the entire cessation, of the forest fires in western Montana. There was somewhat more cloudiness than is seasonable in August. The number of local electric, wind, and hail storms in the lower part of the district appears to have been slightly greater than usual

TEMPERATURE.

The temperature during the greater part of the month was moderate. There were only two pronounced periods of extremes—one of warm and one of cool weather. With a few minor exceptions the means for the month were below the normal, the greatest departures being in North Dakota, Nebraska, and Kansas. In western Iowa the weather was warm on the 1st, and in the Dakotas moderately high temperatures prevailed on the 11th and 12th. The warm weather of these 3 days was caused by atmospheric depressions that moved eastward along the Canadian border, too far to the north to affect very much of the district. On the 19th the eastern portion of a very extensive depression moved over western Montana. It progressed steadily in a southeasterly direction and reached the eastern confines of the district on the 24th, having covered the entire drainage area. It was accompanied by the highest temperatures of the month, and readings of 100° and higher were made in every State in the district. This warm weather was of short duration; it was followed by a wave of high pressure that brought not only the lowest temperatures of the month, but at many stations, from Montana to Missouri, the lowest of record for August. In Montana on the 24th and 25th the record for low temperatures was broken at most stations where observations have been made consecutively for 10 years or more; minimum readings were below the freezing point in most localities and at points in the mountains they were below 20°; the extreme was 5° at Grayling, on the Madison River, just to the west of the Yellowstone Park. Wyoming experienced the lowest August temperatures known in that State. At Cheyenne a minimum of 25° was reached on the 25th, which was 5° lower than any other temperature recorded in August during the last 40 years. At the Fountain, Norris, and Soda Butte stations in the Yellowstone Park minimum temperatures of 7° were recorded. Killing frosts and freezing temperatures occurred in practically every portion of the State, seriously damaging vegetation. Colorado also had some of the lowest August temperatures of record; frost was quite general on the 25th, and at Grover, Weld County, the minimum was 23°, and ice of half an inch thickness formed. In this high country, nearly all of it well above 3,000 feet, the cold was more abnormal than at a lower altitude. In the Dakotas, Nebraska, Kansas, Iowa, and Missouri the weather was unusually cold, but only in Nebraska did it seem to be unprecedented. Temperatures near or below the freezing point were quite general in the Dakotas, but damage from frost was slight, except in the valleys of the Black Hills section of South Dakota. In the northwestern part of Nebraska there was a minimum reading of 23° on the 24th; the lowest August temperature of previous years was 30°. The section director at Lincoln reported as follows with reference to frost:

> The unusually low temperature of the 25–26th was attended by light to killing frost in northern and western Nebraska. This is the first time on record that killing frost has occurred in Nebraska in August, the earliest previous date being September 2. The average date of the first killing frost varies from the last week in September in the western counties to the first week in October in the eastern counties. Killing frost was reported from Deuel and Sheridan counties westward and in Chase and Hayes counties. Light frost was reported as far east as Holt County in the northern portion of the State and Buffalo County in the central portion. The area where killing frost occurred is given mostly to nonagricultural or grazing pursuits, and not much damage resulted to crops.

The last few days of the month had very moderate temperatures.

PRECIPITATION.

The precipitation was heavy in western Iowa, southeastern Nebraska, and northeastern Kansas. It was deficient in numerous localities in Missouri and in south-central Iowa. In the remainder of the district the departures from the normal were not noteworthy. Along the northern part of the Rocky Mountain slope light precipitation was general from the 7th to the 15th, but the greater part of the total for the month occurred on the 24th and 29th. Over the headwaters of the North and South Platte rivers it occurred in showers that were generally light. These showers were well distributed through the month, but they were slightly less frequent during the last 10 days. In the remainder of the district most of the rain fell during the first 17 or 18 days and during the last 3 days. The heaviest falls for the month and for 24 consecutive hours occurred at Lincoln, Nebr., and were 14.21 inches and 8.38 inches, respectively. On the 24th and 25th snow fell in the mountain districts of Montana, northern Wyoming, and southwestern South Dakota. It was heaviest in Montana, where it amounted to several inches.

RIVERS.

The streams at elevations above 2,000 feet were low and continuous progress was made on the government irrigation projects. Over the watersheds of the smaller streams tributary to the Missouri between Sioux City and Kansas City there were some local rains that were heavy enough to cause rapid and in some cases destructive rises, but the effect on the main stream was of minor importance.

The lower Missouri carried less water than it customarily does in August, but its stages were not exceptional. In 12 different years since 1874 the gage at Hermann, Mo., has shown an August stage lower than the minimum for 1910. The Mississippi above the mouth of the Missouri was exceptionally, but not unprecedentedly low. The stage of the Mississippi at St. Louis has been observed daily since January, 1, 1861 (except on Sundays and the principal holidays from January 1, 1861, to July 31, 1872). The lowest August stage shown by the records is 3.6 feet; it occurred on the 31st in 1894 and on the 15th and 16th in 1910. But in 1864, on the 31st, the water fell to a reading of 3.8 feet. A great deal has appeared in the press concerning the low water of August,

1910, but a comparison of the stages of that month and those of August, 1864, show that, while the low stage in the August just passed was 0.2 foot lower than the low stage 46 years ago, August, 1910, had 4 days on which the water was higher than it was on the day it reached its highest point (7.6 feet) in August, 1864. August, 1894, had 5 days with the water above 8 feet. The lack of rain over the main portion of the watersheds of the 2 great branches of the stream above St. Louis is shown by a study of the weather charts for a long period of time to be attributable solely to what may be termed the eccentricities in the formation, movement, and general arrangement of the atmospheric pressure areas. The most pronounced of these areas form outside the limits of the United States, and the influences that caused the low water of August, 1910, 1894, and 1864 can not in any way be considered local or artificial.

MISCELLANEOUS.

There were several severe electric storms in the eastern half of Kansas; several buildings were struck by lightning and one man was killed.

Smoke from the forest fires in Idaho and western Montana was observed in Montana, Wyoming, and South Dakota. In Montana the atmosphere was smoky most of the month and smoke sufficiently dense to obscure the sun at times prevailed in the western portion of the State from the 20th to the 25th. In Wyoming it was observed during the last 10 days, and on the 24th the winds from the high pressure area drove it to the southern border of the State. South Dakota seems to have received an unusually large amount of the smoke; on the 22d and the 23d the sun was obscured for several hours, necessitating the use of artificial light in houses in some sections. The smoke was densest in the Black Hills district and over the northern counties east of the hills. In places cinders were in the air, the smoke affected the eyes and throats of people, and there was general discomfort from it. The sun presented a coppery light much of the time.

HEAVY RAINFALL AND FLOOD AT LINCOLN, NEBR.

By C. C. GARRETT, Observer, Weather Bureau.

On the night of August 28-29, an unprecedentedly heavy rainfall occurred over Lincoln, Nebr., and its vicinity. It accompanied a violent thunderstorm, which came up about 8 p. m. of the 28th and lasted through most of the night. The rain began at 8:20 p. m. and ended at 6:20 a. m., but practically all of it fell in the period between 9:28 p. m. and 6:03 a. m. The total fall was 8.38 inches, which is an average of about 1 inch per hour during the time of heavy rainfall. The rain was by far the heaviest 24-hour fall on record at Lincoln. Since 1881 eleven rains have occurred during which the total precipitation for the 24 hours equaled or exceeded 3 inches. The greatest amount previous to this year was that of July 5-6, 1908, when 5.13 inches fell in about the same period of time as that of the rainfall under discussion.

The heavy rain fell in 2 periods, with an interval of 1 hour and 50 minutes, during which the fall was not at an excessive rate. The tables below give the periods of excessive fall, with the accumulated depths during the excessive rate for consecutive periods of time. The second period is tabulated for each 50 minutes separately.

The rain caused a heavy flood in the Antelope Creek Valley, which runs through the central part of Lincoln, and in the Salt Creek bottoms, which lie on the western border of the city. The crest of the flood was reached in the Antelope Valley in the early morning, the water filling basements and cellars, tearing out pavements, blocking traffic, and washing mud and débris into low-lying houses. The Antelope Valley flood subsided quickly and by the middle of the afternoon most of the water had receded from the streets. In the Salt Creek bottoms the highest water was not reached until about 5 p. m. Property damage similar to that in the Antelope Valley resulted, and one life was lost, a man being drowned by falling off a raft and being drawn into a drainage sewer.

The precipitation was probably heaviest right at Lincoln. No records are kept elsewhere in the Salt Creek drainage area above Lincoln, but from the fact that the height of the flood waters in the Salt Creek Valley was less than that reached in the storm of July 5-6, 1908, when over 3 inches less fell in about the same period of time, it seems probable that the portion of the Salt Creek drainage basin covered by this rain was not as large as that of two years ago. The valley trends south and northeast from Lincoln and the area of greatest rainfall extended a little north of west and a little south of east from Lincoln. The following table gives the amounts of rain where the fall exceeded 3.00 inches for the storm:

	Inches.
Lincoln, Lancaster County	8.38
Seward, Seward County	6.80
Weepingwater, Cass County	6.79
Osceola, Polk County	6.50
Palmyra, Otoe County	5.84
Woodlawn, Lancaster County	5.14
York, York County	4.85
Fullerton, Nance County	4.80
Wahoo, Saunders County	4.65
Blair, Washington County	4.64
Bellevue, Sarpy County	4.20

The amount decreased rapidly in the territory south of Lincoln. At Beatrice, which is about 40 miles to the south of Lincoln, only 0.93 inch fell; at Tecumseh, 0.47; and at Plymouth, in the northeast corner of Jefferson County, 0.50 inch. Ashland, which is located at the junction of Salt Creek with the Platte River, had 2.49 inches.

Tables showing excessive rainfall at Lincoln, Nebr.

AUGUST 28, 1910.

Total duration.		Total am't.	Excessive rate.		Am't before ex. began.	Accumulated depths.													
From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
8:20 p. m.	6:20 a. m., 29th.	8.38	9:28 p. m.	11:14 p. m.	T.	0.12	0.31	0.47	0.61	0.78	0.99	1.27	1.50	1.65	1.72	1.91	2.39	2.77	2.87

AUGUST 29, 1910.

8:20 p. m., 28th.	6:20 a. m.	8.38	1:03 a. m.	1:53 a. m.	3.29	0.05	0.06	0.09	0.12	0.26	0.48	0.56	0.61	0.69	0.83				
			1:53 a. m.	2:43 a. m.		0.92	1.11	1.29	1.46	1.69	1.92	2.08	2.14	2.19	2.34				
			2:43 a. m.	3:33 a. m.		2.49	2.66	2.75	2.82	2.88	2.98	3.06	3.13	3.18	3.24				
			3:33 a. m.	4:23 a. m.		3.28	3.34	3.45	3.49	3.57	3.66	3.72	3.81	3.89	4.00				
			4:23 a. m.	5:13 a. m.		4.04	4.06	4.06	4.12	4.22	4.28	4.29	4.31	4.47	4.50				
			5:13 a. m.	6:03 a. m.		4.60	4.68	4.77	4.81	4.84	4.87	4.90	4.96	5.02	5.08				

THE WORK OF THE WEATHER BUREAU FOR THE BENEFIT OF HORTICULTURE.

(A paper read by Montrose W. Hayes, Local Forecaster, Weather Bureau, before the Seventh Annual Congress of the American Apple Growers, St. Louis, Mo., August 10, 1910.)

It is the Weather Bureau's duty to make itself of benefit to the industries of the country. It is its duty also to extend these benefits whenever it is possible to widen their scope. It is certainly the spirit, if not in every case the letter, of the various laws affecting the Weather Bureau that the Bureau's officials must keep pace with all industrial advances and be prepared to render assistance whenever information about impending or past weather conditions is needed. In other words, it is not deemed sufficient that the officials of the Bureau rest content with furnishing such information as they may have calls for, but they are required to find out how a knowledge of meteorological or climatic conditions can help the country's business, and then to furnish the needed information.

Horticulture has received considerable attention already, but it is a field that is broad, and there is room for the extension of the methods by which the Weather Bureau can aid the fruit grower.

The relations between the Bureau and the horticulturist should be divided and considered under two heads—Meteorology and Climatology.

Meteorology has to do with weather forecasting and has received by far the greater share of consideration. It is, too, the most important, so it will be taken up first in this paper.

Orchard heating has been given a prominent place in your program. It is a subject I am not going to attempt to discuss directly, but it is the one that interests me more than any of the others, for it is the Weather Bureau's duty to tell you when to be prepared to heat. Of course I understand that you keep your heating appliances ready for use throughout the period during which cold weather is liable to be injurious, but even though you are in a constant state of what you may term preparedness there is always much that necessarily must be left until the cold actually begins to settle on the orchards. Then, the weather may turn cold suddenly, late at night, and cause great injury before the fires can be lighted.

Reliable warnings of impending falling temperature would greatly increase your facilities for combating the effects of the cold. They would relieve you of continuous suspense, and enable you to arrange all the minor details for heating, and be prepared in every sense. Each Weather Bureau official charged with the dissemination of forecasts has instructions from the Chief of the Bureau to familiarize himself with the crops that are grown in his territory, and to be alert to see that the growers are advised of impending weather changes that would affect their interests, so every grower of apples, unless he is a long distance from a telegraph or telephone office, can receive warnings of cold weather and frost. Arrangements for receiving the warnings may be made with the Chief of the Bureau or with the nearest Weather Bureau office, and those of you who have not been receiving them can get them without any great amount of formality.

There is one phase of this subject that should be brought to your attention especially, for if you are given a clear understanding of it you will know better how to be guided by the warnings. It is the impossibility of issuing a warning that will apply with equal force over all of any given section of the country, for sometimes in just one orchard a wide variance in the temperature readings can be noticed. Say, for instance, a forecast of a temperature of 30° is issued for southwestern Missouri. The official making the forecast has no means of knowing what the temperature will be on every hill and in every valley of the southwestern part of the State; therefore, he is making a forecast that he expects to be verified by the thermometer readings made at Springfield. In a few minutes I want to have more to say about the decided differences that occur in very small areas. Just now I will pass the subject by stating what all of you know; that is, these differences are very marked at times. Hence, when a cold weather or frost warning is issued it is unfair to expect it to apply uniformly to all the orchards in even a single county. The temperature might fall low enough to injure one orchard seriously and an adjoining orchard might not be hurt. This makes watchfulness necessary after receiving the warning, and several reliable thermometers are almost indispensable. The thermometers should be exposed in various parts of the orchard if the territory is very rolling and frequent readings made as the temperature falls. When the temperature approaches what you consider a dangerous point heating can begin. There is nothing new about any of this and I have no doubt some of you have followed just such a method of procedure.

Another plan for warning the orchardist of falling temperature has been advocated by several of a mechanical bent, but I can not say to what extent the plan has been used. It is to expose in the orchard a metallic thermometer, connected with an electric bell circuit, the bell to be in the dwelling. Then, by a simple mechanical device attached to the metallic thermometer, the bell can be caused to ring and wake the orchardist or his men when the temperature reaches a reading that might be considered dangerous, or a near approach to the dangerous. This scheme is not without merits. In an isolated section of the country, where the official forecasts are not available, an orchardist could rely upon it to a certain degree to warn him that he should get up and ascertain whether he should begin heating. Also in orchards not favorably situated from a temperature standpoint, over which the cold air settles as it flows down from higher ground, it might be used to advantage. The great disadvantage of the plan is the liability of the mechanism to fail to work at a critical time. At any rate it would be unnecessary wherever the official forecasts could be obtained, and very few orchardists are so remote from transportation facilities that they do not have means of electrical communication.

Under the head of Climatology something has been said and written, but I have no means of knowing how much attention has been given the subject in orchard planting. Something greatly to be desired is what may be called a complete climatic survey of the country. The Weather Bureau has made a general climatic survey and has records to show the weather conditions that prevail in a general way over almost every county of the country. These records are being added to daily, but there is a limit to what can be done by the Government in this respect. In many of the fruit-growing sections the country is not level and the topography is favorable for the occurrence of wide temperature differences. In order that the thermal eccentricities may be known numerous thermometer stations, close together, are necessary. The Weather Bureau can furnish the outline, or skeleton chart, and it remains for the horticulturist to fill it in. Work along this line would be particularly valuable to those intending to put out new trees, for it is well known that on account of "thermal belts", "frost zones," etc., some spots are in a great measure free from late frosts, while adjacent areas are very liable to late frosts and late freezes.

Expressed in popular language these belts and zones are due to air drainage. The temperature differences are most marked when the wind is calm or light. The air at night cools as a result of radiation; cold air is heavier than warm air and it drains away and settles over spots where the facilities or opportunities for drainage do not exist. These spots, therefore, are cold and the places from which the cold air has drained are correspondingly warm. This phenomenon occurs annually in western North Carolina and has received the attention of some of the world's leading climatologists. It occurs, undoubtedly, in just as marked a degree in many other parts of the country and probably to less extent in almost every hilly or rolling section. It seems that this is a matter worthy of attention by the man who is going to put out trees. The Weather Bureau stands ready to furnish all the information at its command and to give such advice as it can that would aid in investigation of this subject of air drainage or temperature inversion.

TABLE 1.—*Climatological data for August, 1910. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Barnum	Johnson	5,500	5								T.		T.	0.0	0	26	4	1	w.	Thomas Freegaurd.
Basin	Big Horn	3,862	11																	O. J. Robertson.
Bennett	Carbon		2								0.55		0.26	0.0	5	25	6	0	w.	Chas. C. Young.
Big Creek Station	...do																			U. S. Forest Service.
Burns	Laramie		1																	Henry D. Colburn.
Cheyenne	...do	6,088	39	64.8	− 1.0	89	19	25	25	46	0.62	− 0.85	0.41	0.0	7	7	20	4	nw.	U. S. Weather Bureau.
Chugwater	...do	5,282	9	65.6	− 0.3	96	19	21	25	57	0.05	− 1.12	0.03	0.0	2	19	10	2	nw.	George Milne.
Clark	Big Horn	4,320	4	67.5		94	21	30	25	43	0.22		0.09	0.0	5	19	11	1	n.	Chas. A. C. Snow.
Cody	...do	5,000	3																	F. A. Fish.
Crystal Lake	Laramie	6,900	1																	Cheyenne City Engineer.
Dome Lake	Sheridan	8,821	2																	Chas. Hidlay.
Douglas	Converse	4,793	1																	Henry C. Miller.
Dubois	Fremont	6,909	3	57.0		84	19†	20	25	55	0.08		0.08	0.0	1	17	14	0	w.	Dr. F. H. Welty.
Eaton's Ranch	Sheridan	4,600	5	67.2		96	21	32	25	45	0.03		0.03	T.	1	24	5	1	n.	F. A. Eaton.
Echeta	Crook	4,200	1								0.60		0.50	T.	2	20	5	6	s.	M. R. Hunter.
Elk Mountain	Carbon		5								1.74		1.61	0.0	2					Wm. Richardson.
Encampment	...do	7,322	1	64.0		85	22	27	25	45[b]	0.21		0.12	0.0	4	20	7	2	sw.	U. S. Forest Service.
Ervay	Natrona		1																	Frank Jameson.
Fort Laramie	Laramie	4,270	32	60.3	− 2.2	100	21†	29	25†	58	0.53	− 0.42	0.46	0.0	2	8	18	5	n.	John Hunton.
Fox Creek Station	Albany	9,015		51.2		77	20	10	25	59	0.51		0.23	0.0	6	8	23	0	w.	U. S. Forest Service.
Gillette	Crook	4,546	4	67.6		97	11	29	25	55	0.51		0.29	T.	3	27	3	1		S. D. Perry.
Hunters' Station	Johnson	8,000	4	56.2		81	20†	14	25	50	0.39		0.26	2.0	2	24	4	3	w.	U. S. Forest Service.
Hyattville	Big Horn	4,632	11	65.8	− 2.5	96	19†	23	25	56						20	10[b]	1	w.	Wm. Booth.
Jireh	Converse	5,050									1.35		1.19	0.0	5	24	0	7	se.	P. L. Ford.
Kirtley	...do		6	64.6	− 1.4	94	19†	28	25	53	0.18	− 1.52	0.16	0.0	2	22	7	2	n.	D. M. Zum Brunnen.
Kirwin	Big Horn	9,187	2	50.3		72	19	15	25	49	0.60		0.28	0.0	4	19	11	1	w.	C. L. Tewksbury.
Knowles	Crook		1								1.85		0.73	2.0	7					G. A. Knowles.
Lander	Fremont	5,372	18	64.2	− 1.5	91	19	23	25	59	0.36	− 0.18	0.33	0.0	3	13	17	1	w.	U. S. Weather Bureau.
Laramie	Albany	7,188	19	62.4	+ 0.5	86	20	20	25	57	0.27	− 0.81	0.27	0.0	1	25	6	0	w.	University of Wyoming.
Leo	...do	6,878	9	63.2	0.0	88	19†	14	25	54	T.	− 0.45	T.	0.0	0	23	4	4	w.	C. A. Cowdin.
Lolobama Ranch	Big Horn	7,052	6	52.8	− 3.2	82	3	16	28	62	0.35	− 1.09	0.30	2.0	2	29	2	0	e.	Mary E. Painter.
Lovell	...do	3,825	5	63.8	− 3.4	96	19	28	26	51	0.44		0.19	0.0	4	20	4	7	n.	R. Fred Harrison.
Lusk	Converse	5,007	20																	D. E. Goddard.
Manville	...do	5,050	1								0.75		0.54	0.0	5	25	4	2	se.	C. A. Sherman.
Moorcroft	Crook	4,111	7	67.0	− 1.8	100	11	28	25†	61	0.65	− 0.93	0.30	1.0	3	14	10	7		James K. Somers.
Moore	Albany	6,000	9	65.4[d]	+ 0.7	91	20†				0.20	− 1.18	0.14	0.0	5	11	11	5	w.	Edwin Moore.
Newcastle	Weston	4,319	3	69.8		98	11†	26	25	50	0.20		0.16	T.	2	23	8	0	nw.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	4	69.2	− 0.1	96	19	27	25	55	T.	− 0.75	T.	0.0	0	29	1	1	sw.	U. S. Reclamation Service.
Phillips	Laramie	4,900	7																	Mrs. Arthur Rugg.
Powell	Big Horn	4,376	3	65.8		95	20	26	25	55	0.28		0.22	T.	3	24	7	0	nw.	U. S. Reclamation Service.
Rawlins	Carbon	6,748	8	63.9	− 0.6	89	19	27	25	47	0.22	− 0.30	0.20	0.0	2	20	11	0	w.	E. J. Ehrenfeld.
Riverton	Fremont	4,960	2																	J. F. Nelson, jr.
Saratoga	Carbon	6,785	12	64.9	+ 1.5	90	20†	20	25	55	0.22	− 0.76	0.15	0.0	2	18	13	0	e.	Saratoga & Enc'pm'nt Ry.
Sheridan	Sheridan	3,790	15	63.0	− 3.1	96	21	26	25	59	0.42	− 0.38	0.29	T.	5	7	19	5	nw.	U. S. Weather Bureau.
Shoshone Dam	Big Horn	5,385	4	63.5		92	11†	33	25†	45	T.		T.	T.	0	25	6	0	w.	U. S. Reclamation Service.
Soldiers' Home	Johnson	4,635	18	67.0	− 1.0	93	20†	28	25	42	0.39	− 0.48	0.18	0.5	4	12	19	0	nw.	Geo. L. Courtney.
South Pass City	Fremont	7,873	8	54.4		81	19	9	25	57	0.11		0.04	0.0	5	19	9	3	sw.	John Sherlock.
Thermopolis	...do	4,350	6	67.3	− 2.7	99	19	23	25	67	0.00		0.00	0.0	0	22	8	1	sw.	A. L. Duhig.
Upton	Weston		1																	C. E. McPherren.
Valley	Big Horn	6,500	1								0.12		0.07	0.0	3	23	7	1	w.	Jas. L. McLaughlin.
Verona	Sheridan		1								0.71		0.54	2.0	3	14	16	1	se.	O. A. Roode.
Wiant's Ranch	Carbon	7,400									0.66		0.25	0.0	5	9	12	10		Ira G. Wiant.
Wiley	Big Horn	5,375	1																	C. D. Marshall.
Wyncote	Laramie	4,207	3	68.0		95	19†	27	25	57	0.74		0.52	0.0	2	23	6	2	e.	U. S. Reclamation Service.
Yellowstone Park	Yellowstone Park	6,200	22	57.3	− 3.6	84	19	25	25	47	0.52	− 0.50	0.19	T.	5	19	11	1	sw.	U. S. Weather Bureau.
(1) Fountain Hotel	...do	7,220	4	51.8		82	4	7	25	61	0.18		0.18	2.0	1	29	1	1	s.	U. S. Army.
(2) Grand Canyon	...do	7,900	3	51.7		81	19	9	25	58	0.59		0.29	T.	3	19	0	12	w.	Do.
(3) Lake Hotel	...do	7,733	6	51.9		81	19	13	25	48	0.66		0.45	1.5	6	22	3	6	s.	Do.
(4) Norris	...do	7,525	6	50.4		81	19	7	25	58	0.20		0.20	T.	1	28	2	1	w.	Do.
(5) Riverside	...do	6,500	4	53.7		88	19	9	25	61	0.12		0.12	0.0	1	20	8	3	w.	Do.
(6) Soda Butte	...do	7,000	5	53.5		85	19	7	25	63						25	3	2	sw.	Do.
(7) Sylvan Pass	...do	7,000	3	54.4		88	3	14	25	55	0.41		0.25	0.0	2	27	3	1	w.	Do.
(8) Thumb	...do	7,772	4	53.1		86	19	14	25	54	0.33		0.33	0.0	1	13	8	10	sw.	Do.
(9) Tower Falls	...do	6,250	1	56.4		89	19	14	25	60	1.00		0.43	0.0	3	20	0	11	ne.	Do.
(10) Upper Gey. Basin	...do	7,395	6	53.5		82	19	20	25	52	0.19		1.17	T.	2	18	8	5	se.	Do.
Montana.																				
Adams	Dawson		2																	W. B. Ennis.
Adel	Cascade	5,200	11	59.8	+ 0.6	89	19	28	24	45	3.11	+ 1.80	2.00	2.0	2	5	9	17	w.	Bessie F. Burch.
Agricultural College	Gallatin	4,700	12	60.0	− 2.6	89	19†	26	25	44	1.46	+ 0.41	0.72	3.0	4	17	13	1	se.	E. Burke.
Augusta	Lewis & Clark	4,071	12																	C. C. Covington.
Babb	Teton	4,461	4	54.4		83	9	29	24	46	1.52		0.45	2.0	9	11	2	18	sw.	U. S. Reclamation Service.
Bald Butte	Lewis & Clark	6,500	1								0.79		0.55	4.3	3	19	6	6		Matt W. Alderson.
Big Timber	Sweetgrass	4,072	5	64.7		93	19	28	25	52	1.05		0.65	T.	2	21	8	2	w.	F. A. Severance.
Big Timber Creek	...do										0.83		0.60	3.0	6	18	12	1	w.	J. T. Mjolsness.
Billings‡‡	Yellowstone	3,115	15	64.0	− 6.0	99	20	28	25	52	1.28		0.70		6					U. S. Weather Bureau.
Boulder Nursery	Jefferson	4,920	14	58.7[e]	− 3.7	92	19	27	24	54[e]	1.19	+ 0.46	1.00	0.7	2	16[e]	9[e]	1[e]		U. S. Forest Service.
Bowen	Beaverhead	6,060	4																	B. B. Lawrence.
Bridger	Carbon	3,664	2	63.8		96	21	30	26†	59[b]	0.27		0.19	0.0	3	7[b]	17[b]	5[b]	n.	L. E. Gard.
Broadview Exp. Station	Yellowstone		4	62.4		97	20†	27	25	56	0.91		0.60	1.0	4	6	24	1	e.	Dr. W. X. Sudduth.
Busby	Rosebud		5	65.0		99	11†	26	25	61	0.54		0.31	1.0	5	18	12	1	ne.	C. A. Linscheid.
Busteed	Sweetgrass		2	62.2		100	11	26	25	51	1.15		0.51	3.5	6	17	2	12	nw.	Thos. H. Busteed.
Cabin Creek	Beaverhead										0.27		0.15	2.3	3	27	0	4	sw.	W. J. Crowell.
Canyon Ferry	Lewis & Clark	3,644	12	63.1	− 2.8	93	4†	28	25	53	1.32	+ 0.30	1.32	0.0	1	19	8	4	nw.	A. C. Pratt.
Cascade	Cascade	3,361	5	63.1		96	19	30	26	58	0.67		0.42	0.8	2	25	5	1	sw.	E. E. James.
Chessman Reservoir	Lewis & Clark	5,275	2	55.4		82	19	21	25	44	1.74		1.00	6.0	4	24	5	2	w.	Chas. D. Schmidt.
Chester	Chouteau	3,140	7																	Great Nor. Exp. Station.
Chinook	...do	2,502	10																	Thos. O'Hanlon Co.
Chouteau	Teton	3,810	6																	Henry Davidson.
Clear Creek	Chouteau		4	61.6		91	19†	29	25	47[b]	0.41		0.21	0.0	2	14[e]	6[e]	6[e]	w.	Cortes Sedgwick.
Clemons	Lewis & Clark	4,672	1								1.19		1.02	3.0	3	15	8	8	w.	Frank Eberl.
Clyde Park	Park		1								0.70		0.26	T.	4	22	8	1	w.	L. B. Marquis, M.D.
Copper	Meagher		5								0.26		0.11	1.0	3	26	4	1	w.	Orville Harris.
Crow Agency	Rosebud	3,041	28	64.0	− 5.4	98	1	27	25	57	0.61	− 0.37	0.52	T.	3	25	3	3	nw.	F. E. Server.
Culbertson	Valley	1,927	8																	G. H. Coulter.
Cut Bank	Teton	3,700	12	59.4	− 0.6	89	19	25	25	49	0.60	− 0.57	0.22	0.0	3	23	6	2	w.	Chas. N. Thomas.
Decker	Rosebud	3,400	6																	Adam Anderson.
Delpine	Meagher	5,000	1								0.84		0.22	T.	5	12	16	3	w.	T. L. Holliday.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Montana—Cont'd.																			
Denton	Fergus		2			94°	19†	28°	25	43°				0.5		12°	6°	4°		P. T. Griesenauer.
Dillon	Beaverhead	5,147	13	60.2	− 2.1	90	19†	25	25	56	0.11	− 1.23	0.09	T.	2	19	7	5	sw.	J. E. Monroe.
Dirty Creek	Meagher	6,000	1								0.99		0.45	T.	4	28	1	2	w.	Lewis Cameron.
Dry Creek	Broadwater	5,500	1								0.99		0.75	1.7	4	20	10	1	nw.	J. C. Stuart.
Dry Wolf Camp	Cascade	6,000	1								1.24		0.76	1.0	6	10	13	8	sw.	Mrs. R. J. Eveleth.
East Gallatin River	Gallatin	6,000	1								1.62		0.84	5.0	5	24	4	3	w.	John Eberhart.
Ekalaka	Custer		10	66.4		97	11	32	25	44	2.63		2.33	0.0	4	20	6	5	w.	Wm. Freese.
Elkhorn	Jefferson	6,576	1								0.85		0.85	3.0	1	14	10	7	sw.	James Heagan.
Evans	Cascade	4,900	3																	H. Thrasher.
Fallon	Custer	2,208	6	65.4		100	5	33	16†	48	1.17		0.58	0.0	3	9	15	7	w.	Mrs. A. C. Gifford.
Family‖	Teton	3,950	1	59.7		89	9	29	17	47	0.60		0.34	2.0	3	10	12	9	w.	U. S. Reclamation Service.
Fish Creek‖	Silver Bow	8,500	1	54.5		78	11†	22	25	40	0.63		0.38	T.	2					O. B. Tilton.
Fish Tail Creek	Carbon	5,000	1								0.61		0.28	1.0	5	22	9	0	w.	O. E. Haskin.
Flathead Creek	Gallatin	6,000	1								1.32		0.79	2.7	3	20	10	1	nw.	L. G. Brown.
Forsyth	Rosebud	2,514	4	71.0*		100	21	29	26	48*	0.65		0.65	0.0	1	10*	4*	10*		J. M. Patterson, jr.
Fort Benton	Chouteau	2,630	30																	Jere Sullivan.
Fort Shaw	Cascade	3,500	22	61.8	− 2.8	94	19	31	24	51	0.25	− 0.62	0.25	0.0	1	22	4	5	w.	U. S. Reclamation Service.
Fort W. H. Harrison‖‖	Lewis & Clark	4,004	6	64.4		93	20	31	25	41						22	6	3	n.	Post Hospital.
Foster	Yellowstone		1	64.8		100	1†	27	25	57	0.53		0.40	T.	4	25	5	1	ne.	E. K. Bowman.
Garnett	Fergus	5,500	1	59.6		90	3	24	25	47	1.08		0.80	1.0	4	7b	7b	15b	nw.	Thos. E. Scally.
Glendive	Dawson	2,069	20			103*	8	32*	25		4.17	+ 3.06	2.63	0.0	4					W. B. Walker.
Goldbutte	Chouteau		3	60.2		92	19	25	25	47	0.16		0.13	T.	3	18	8	5	n.	J. T. Berthelote.
Graham	Custer		4	63.8*		99	10	27	26†	64*	0.89		0.21	T.	7	15*	6*	3*	nw.	J. S. Rue.
Grayling	Gallatin	6,700	4	51.0		85	19	5	24	65	0.24		0.13	0.0	3	11	8	12	sw.	P. Kerzenmacher.
Great Falls	Cascade	3,350	19	64.2	− 2.4	91	19	34	24	37	0.25	− 0.68	0.16	0.0	2	19	9	3	sw.	S. H. Bauman.
Half Moon Pass	Fergus	6,500	1								2.65		1.35	3.5	5	10	19	2	w.	Thos. Stigen.
Half Way House	Broadwater	6,000	1								0.60		0.49	T.	5	18	13	0	sw.	Gordon Deans.
Harlowton	Meagher	4,165	2	59.5		89	10†	29	17	49	0.64		0.55	0.0	2	6	3	22	w.	Joseph Muir.
Havre	Chouteau	2,505	30	63.2	− 3.7	93	20	27	25	45	0.37	− 0.91	0.23	0.0	3	15	10	6	nw.	U. S. Weather Bureau.
Helena	Lewis & Clark	4,110	30	62.4	− 3.7	92	19	29	25	43	1.06	+ 0.37	0.91	T.	6	15	11	5	sw.	Do.
Highwood	Chouteau		3								2.00		1.45	1.5	2	22	5	4	sw.	W. S. McCord.
Home Park	Madison		5								0.35		0.28	0.0	2	30	0	1	w.	H. L. Miller.
Huntley	Yellowstone	3,014	4	67.0		99	19	31	25	53	1.00		0.49	0.0	3	16	12	3	e.	U. S. Reclamation Service.
Jones Canyon	Gallatin	6,800	1								1.48		0.68	0.0	5	7	22	2	w.	Jas. McCune.
Jordon	Dawson		5																	W. C. Henderson.
Lewistown	Fergus	4,010	13	59.6	− 3.1	93	19	27	25	50	0.81	− 0.51	0.57	T.	3	12	15	4	nw.	W. W. Watson.
Livingston	Park	4,488	13	64.2	− 2.6	95	19	32	24†	56	0.90	− 0.05	0.33	3.0	7	20	6	5	sw.	Lewis Terwilliger.
Lone Tree	Chouteau		5	64.8		96*	19	28*	25	51*	0.94		0.70	T.	3	25	4	2	w.	E. Wilson.
Lost Horse Creek	Meagher	5,800	1								1.08		0.77	7.7	6	14	10	7	w.	C. M. Mason.
Malta	Valley	2,240	3	63.0		97	1	26	25	45	0.76		0.29	0.0	3	18	8	5	w.	U. S. Reclamation Service.
Meadow Creek	Madison	6,700	1								0.08		0.05	0.5	3	20	10	1	sw.	F. E. Parent.
Melstone	Fergus	2,903	1								1.04		0.60	0.0	4					E. J. Parkinson.
Mildred	Custer		1								0.94		0.66	0.0	4	11	19	1	nw.	Leon B. Clarke.
Miles City	do	2,371	19																	U. S. Weather Bureau.
Moore	Fergus		3								1.45		1.02	4.0	4	21	5	5	ne.	Clyde Grove.
Norris	Madison	4,845	4	66.6		94	19	34	24†	45	1.96		1.70		4	14	4	13	s.	Madison River Power Co.
Nye	Sweetgrass		2	55.0		84	19†	14	25	53	0.46		0.25	0.0	4	26	3	2	e.	F. L. Bryant.
Olsen Creek	Jefferson	6,345	1								0.89		0.81	0.6	3	28	2	1	w.	Robt. Olsen.
Pipestone Pass	do	7,000	1								0.91		0.57	1.5	6	21	9	1	w.	Mrs. Theola Kiermeyer.
Poplar	Valley	2,020	25	64.1	− 3.1	98	1	32	25	43	1.67	+ 0.67	0.49	0.0	6	21	3	7	n.	H. M. Cozier.
Raymond‖‖	Teton	4,260	5	53.4		85	19	23	24	40	0.95		0.65	T.	2	17	11	3	nw.	W. H. Campbell.
Red Lodge	Carbon	5,548	10	58.4	− 2.4	88	21	28	25†	49	0.87	− 0.07	0.85	1.0	2	19	10	2	nw.	I. A. Draper.
Reese Creek	Gallatin	5,000	1								1.39		0.87	4.8	2					Henry Cramer.
Renova	Jefferson	4,353	11	60.6	− 3.4	93	4†	30	25	62	0.04	− 0.66	0.02	T.	3	25	5	1	sw.	F. B. Elmer.
Rimini	Lewis & Clark	7,900	2																	Milo Brooks.
Ryegate	Yellowstone	3,640	1	62.7		96	19	25	25	56	1.09		0.70	T.	6	24	7	0		H. W. Scherfenberg.
Sedan	Gallatin	3,155	2																	Asa Hennes.
Springbrook	Dawson		9	64.6		98	1	32	26	53	1.00		0.60	0.0	4	9	13	9	w.	Mrs. H. L. Miller.
Stearns	Lewis & Clark	4,500	1								0.90		0.90	0.0	1	16	0	15		J. W. Hardgrove.
Three Forks	Gallatin	4,066		61.4		95	20	20	25	59	0.53		0.43	0.0	2	20	7	4	sw.	A. A. Adams
Tokna‖ ‖‖	Dawson	2,050	5																	U. S. Reclamation Service.
Townsend	Broadwater	3,790	1								0.50		0.25		2					River Observer.
Trail Creek	Park	6,000	1								1.50		0.74	0.6	6	17	13	1	w.	Andrew Wiedenbauer.
Utica	Fergus	5,000	16			85	1†	28	24	0	0.67	− 0.33	0.25		3	27	2	1	w.	P. W. Korell.
Valentine	do		4	63.4		98	19	27	25	50	0.92		0.48	0.0	3	24	5	2	w.	B. M. Bean.
Virginia City	Madison	5,880	22	60.8	− 3.1	88	4	26	25	45	0.62	− 0.56	0.18	0.5	6	19	9	3	e.	Francis Mailand.
Wall Rock Mountain	Broadwater	5,600	1								0.43		0.31	0.0	2	22	7	2	w.	D. L. Doig.
Warm Springs Creek	Madison	7,500	1								1.04		0.39	0.2	9	7	12	12	sw.	M. D. Lytle.
Willow Creek	Park	9,000									1.82		0.61	5.0	4	9	21	1	w.	John Topp.
Wolf Creek	Lewis & Clark	4,000	5																	A. W. Verharen.
Wolf Point	Valley	1,995																		River Observer.
Woodville	Jefferson	6,378	1								0.75		0.71	1.0	4	16	12	3	sw.	Anna Kinman.
North Dakota.																				
Aplin	Oliver		3	64.4		100	29	36	24†	50	1.16		0.40	0.0	7	13	11	7	w.	J. B. Hagelbarger.
Beach	Billings	2,759	3	62.2		98	11	32	25†	48	1.23		0.60	0.0	6	18	4	9	nw.	D. J. Steiner.
Berthold Agency	McLean	2,082	13	62.7	− 6.3	98	11	31	26	50b	1.09	− 0.06	0.53	0.0	3	19	3	9	w.	C. L. Hall.
Bismarck	Burleigh	1,674	35	64.8	− 3.3	98	11	38	26	43	1.26	− 0.72	0.64	0.0	9	13	10	8	nw.	U. S. Weather Bureau.
Broncho	Mercer		2	68.3		95	10	35	29	53	1.34		0.54	0.0	4	2	24	5	s.	E. M. Walker.
Buford	Williams	1,944	4	63.4		97	11	35	25	44	2.03		0.56	0.0	7	10	0	21	w.	G. O. Sanford.
Coal Harbor	McLean	1,901	13	65.1	− 1.1	99	11	33	31	49	1.39	− 0.28	0.50	0.0	3	15	0	16	nw.	F. H. Childs.
Dickinson	Stark	2,453	17	62.9	− 4.6	97	11	33	25	45	1.61	− 0.24	0.55	0.0	6	18	8	7	se.	L. R. Waldron.
Edgeley	Lamoure	1,468	8	65.3	− 1.6	94	21	34	31	45	1.96	− 0.34	1.43	0.0	9	11	4	16	nw.	O. A. Thompson.
Epping	Williams		2								1.66		0.55	0.0	7	14	7	10	nw.	M. E. Ugan.
Fullerton	Dickey	1,439	11	64.8	− 1.8	90	11†	35	26	47	3.31	+ 0.31	1.18	0.0	6	16	10	5	s.	F. O. Alin.
Haley	Bowman		2	60.6		100	11	43	24†	36	1.55		1.02	0.0	7	15	2	14	nw.	A. M. Oberchain.
Hettinger	Adams		3																	F. E. Ellickson.
Howard	Williams	2,275	3	59.3		94	1	27	25	55	1.59		0.61	0.0	7	10	7	14	nw.	C. P. Amsbaugh.
Jamestown	Stutsman	1,390	22	67.4	+ 0.6	89	5†	40	10	45	1.98	− 0.36	0.55	0.0	5	9	18	4	nw.	L. B. Baldwin.
Lamoine	Kidder		2																	E. V. Virgin.
Lamoure	Lamoure	1,307	3								1.97		0.98	0.0	5					E. O. Ellison.
McHenry	Eddy	1,509	1	61.6		94	11	34	31	45	1.52		0.95	0.0	7	10	10	11	nw.	John Knox.
Manfred	Wells	1,605	8	62.0		95	11	33	31	46	0.92		0.48	0.0	3	14	10	7	sw.	P. B. Anderson.
Marmarth	Bowman		2								1.06		0.50	0.0	6	19	5	7	nw.	S. P. Grane.
Marstonmoor	Stutsman		2	59.6		95	11†	24	26	56	1.33		0.45	0.0	4	11	13	7	nw.	H. H. McCumber.
Medora	Billings	2,225	13	65.5	− 2.8	98	19	30	23	53	0.49	− 1.09	0.28	0.0	2	21	5	5	ne.	J. W. Hesser.
Melville	Foster	1,590	12	65.0	− 1.8	98	21	36	31	50c	0.64	− 1.24	0.42	0.0	3				nw.	J. P. Kidder.
Mott	Hettinger		3	62.2		98	11	31	25	44	2.58		0.82	0.0	7	14	6	11	nw.	O. H. Opland.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Cont'd.																				
Napoleon	Logan	1,955	18	62.6	− 4.3	91	10	32	26	53[b]	3.08	+ 0.63	1.56	0.0	7	12	6	13	nw.	C. J. Hoof.
New England	Hettinger	2,400	14	63.6	− 3.1	109	11	31	26	64	0.91	− 0.71	0.50	0.0	4	18	0	13	nw.	W. C. McKenzie.
New Salem	Morton	2,163	3	64.0	.....	91	5†	36	31	42	2.73	.....	1.39	0.0	7	13	9	9	nw.	J. Christianson.
Orange	Adams	.....	3	63.0	.....	100	11	34	26	47	1.50	.....	0.57	0.0	7	14	10	7	nw.	J. E. Goforth.
Palermo	Ward	2,200	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. A. McCann.
Schafer	McKenzie	.....	1	64.3	.....	95	11	32	25	45	2.45	.....	1.38	0.0	5	18	4	9	nw.	F. L. Clark.
Steele	Kidder	1,857	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. C. Smith.
Washburn	McLean	1,731	6	64.0	.....	99	11	36[a]	26†	44[a]	1.21	.....	0.45	0.0	5	16	8	7	w.	W. R. Peterson.
Williston	Williams	1,875	30	62.3	.....	95	11	36	25	47	1.55	.....	0.84	0.0	7	14	9	8	nw.	U. S. Weather Bureau.
Wishek	McIntosh	2,010	5	.....	.....	.....	.....	.....	.....	.....	1.31	.....	0.55	0.0	6	.....	.....	.....	.....	H. E. Timm.
South Dakota.																				
Aberdeen	Brown	1,300	20	65.8	− 3.4	94	20	36	26	46	2.47	− 0.65	0.60	0.0	9	16	7	8	n.	D. G. Gallett.
Academy	Charles Mix	.....	11	70.2	− 2.7	100	1	41	26	44	1.34	− 1.89	0.30	0.0	9	12	14	5	se.	I. T. Lothrop.
Alexandria	Hanson	1,352	21	69.0	− 2.4	95	1	37	26	44	0.99	− 1.78	0.46	0.0	3	3	28	0	nw.	W. S. Hill.
Ardmore	Fall River	3,557	1	.....	.....	.....	.....	.....	.....	.....	0.43	.....	0.22	0.0	2	22	5	4	e.	Chi., Burl. & Quincy R. R.
Armour	Douglas	1,521	15	69.4	− 2.9	99	21	37	26	44	0.40	− 2.45	0.25	0.0	3	.....	.....	.....	.....	T. J. Markey.
Belle Fourche	Butte	3,000	2	65.0	.....	98	20	31	24	45	1.25	.....	0.50	0.0	5	14	12	5	se.	U. S. Reclamation Service.
Brookings	Brookings	1,636	21	66.8	− 1.1	94	1	35	26†	45	2.46	− 0.30	1.71	0.0	6	6	13	12	se.	Experiment Station.
Camp Crook	Harding	3,000	18	.....	.....	.....	.....	.....	.....	.....	1.06	− 0.24	0.56	T.	4	21	0	10	.....	U. S. Forest Service.
Canton	Lincoln	1,248	15	68.0	− 2.7	96	2	36	26	45	4.26	+ 1.49	2.43	0.0	5	21	7	3	se.	John H. Holsey.
Cascade Springs	Fall River	3,422	2	68.0	.....	98	19†	28	26	58[a]	0.30	.....	0.18	0.0	3	19	6	6	ne.	Fred Noerenberg.
Castlewood	Hamlin	1,685	4	65.3	.....	91	21	37	26	47	2.42	.....	1.14	0.0	7	7	8	16	s.	M. N. Bradley.
Centerville	Turner	1,229	13	68.6	.....	95	1	39	26	41	2.35	− 1.00	0.74	0.0	6	4	20	7	se.	Frank Williams.
Chamberlain	Brule	1,363	13	71.1	− 2.9	97	1†	41	26	47	1.67	− 1.06	0.34	0.0	8	12	16	3	se.	G. A. Fry.
Clark	Clark	1,779	16	66.4	− 2.5	94	12	38	26	42	2.52	− 0.35	1.64	0.0	4	16	14	1	s.	O. H. LaCraft.
Cottonwood	Stanley	2,414	2	65.4	.....	105	21	27	25	60	0.48	.....	0.20	0.0	4	18	9	4	se.	Experiment Station.
Crow Creek	Buffalo	1,385	.....	.....	.....	.....	.....	.....	.....	.....	1.40	.....	0.43	0.0	11	10	13	8	e.	William Fuller.
Daviston	Perkins	.....	1	.....	.....	.....	.....	28	26	.....	1.74	.....	0.85	0.0	5	16	9	6	nw.	G. G. Davis.
Deadwood	Lawrence	4,535	1	63.0	.....	94	20	28	25	47	1.50	.....	0.70	0.5	7	22	7	2	.....	R. E. Grimshaw.
Deerfield	Pennington	6,000	1	.....	.....	.....	.....	.....	.....	.....	0.79	.....	0.41	T.	2	24	3	4	sw.	Frank E. Miller.
De Smet	Kingsbury	1,726	17	66.4[f]	− 3.1	96	1	38	31	44[f]	3.13	+ 0.54	1.45	0.0	7	24	5	2	se.	J. O. Purintun.
Dowling	Stanley	2,250	1	69.6	.....	102	20	36	25	41	0.91	.....	0.37	0.0	6	11	16	4	se.	M. P. Dowling.
Dumont	Lawrence	6,195	1	.....	.....	.....	.....	.....	.....	.....	1.18	.....	0.39	0.1	6	16	12	3	sw.	A. B. Wood.
Elk Mountain	Custer	4,700	1	.....	.....	.....	.....	.....	.....	.....	0.23	.....	0.13	0.0	2	18	7	6	se.	James E. Blaine.
Elk Point	Union	1,127	11	69.7	− 4.2	94	1	42	25†	44	2.28	− 1.02	1.30	0.0	5	.....	.....	.....	.....	M. Hoffman, jr.
Englewood	Lawrence	5,723	1	.....	.....	.....	.....	.....	.....	.....	1.70	.....	1.15	1.0	4	15	2	14	s.	T. J. Cummins.
Eureka	McPherson	1,884	1	67.1	.....	98	21	39	26	41	2.60	.....	1.41	0.0	7	7	21	3	e.	Experiment Station.
Faulkton	Faulk	1,595	15	68.1	− 0.9	96	12†	44	25	39	2.84	+ 0.44	1.78	0.0	8	18	10	3	se.	Miss Belle Talcott.
Flandreau	Moody	1,565	20	67.5	− 1.3	92	12	37	26	43	2.43	− 0.93	0.74	0.0	7	14	13	4	s.	W. A. Harris.
Forestburg	Sanborn	1,231	18	67.8	− 2.8	95	21	34	26	50[e]	2.14	− 0.12	1.63	0.0	5	13	15	3	se.	S. S. Judy.
Fort Meade	Meade	3,624	28	69.0	− 1.6	100	20	35	25	46	1.44	− 0.31	0.86	0.0	5	15	12	4	e.	Post Hosiptal.
Frederick	Brown	1,371	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Jeffers.
Gannvalley	Buffalo	.....	12	70.6	− 2.5	100	1	40	26	45	5.51	+ 2.40	2.80	0.0	9	10	15	6	sw.	V. P. Dripe.
Greenmont	Lawrence	6,430	1	.....	.....	.....	.....	.....	.....	.....	3.15	.....	1.70	2.0	8	22	9	0	w.	H. C. Hoffbuhr.
Greenwood	Charles Mix	.....	16	71.7	− 2.7	100	1	44	26	44	0.78	− 2.23	0.24	0.0	4	14	13	4	se.	T. C. Williamson.
Hardy Ranger Station	Lawrence	6,600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary E. Seals.
Harvey's Ranch	...do	6,282	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jerome Harvey.
Hermosa	Custer	3,278	4	.....	.....	.....	.....	.....	.....	.....	0.63	.....	0.35	0.0	6	15	15	1	.....	S. M. Booth.
Highmore	Hyde	1,890	14	70.0	− 1.7	101	21	41	26	45	0.66	− 1.81	0.22	0.0	8	10	12	9	se.	Experiment Station.
Hill City	Pennington	5,067	1	.....	.....	.....	.....	.....	.....	.....	0.62	.....	0.26	0.0	6	24	4	3	sw.	Geo. A. Karr.
Hopewell	Stanley	.....	.....	70.8	.....	102	21	40	25	42	1.30	.....	0.95	0.0	4	12	13	6	.....	E. R. Myers.
Howard	Miner	1,564	18	67.2	− 2.3	96	1†	37	26	45[a]	1.87	− 0.87	0.85	0.0	6	14	12	5	se.	J. J. Cox.
Howell	Hand	.....	8	68.2	.....	99	19†	32	26	58	0.58	.....	0.20	0.0	6	20	10	1	nw.	M. A. Shuster, jr.
Huron	Beadle	1,306	28	68.0	− 1.1	95	1	38	26	42	1.43	− 1.21	0.49	0.0	9	11	15	5	s.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. B. Taylor.
Kadoka	Stanley	2,467	1	70.6	.....	106	21	37[c]	25	47[c]	0.80	.....	0.24	0.0	7	8	10	13	nw.	Rev. D. S. Brown.
Kennebec	Lyman	1,689	17	70.2	− 2.2	101	2	37	26	45[b]	1.08	− 1.06	0.27	0.0	5	15	11	5	se.	R. C. Van Horn.
Kidder	Marshall	1,295	6	65.5	.....	90	20†	36	31	43	2.95	.....	1.00	0.0	5	19	1	11	se.	H. C. Schussler.
Kimball	Brule	1,788	21	69.0	− 2.1	95	1†	37	26	44	1.24	− 1.60	0.37	0.0	6	19	6	6	se.	G. D. Rose.
La Delle	Spink	1,400	13	68.0	− 2.4	95	12	35	26	45	2.95	− 0.94	0.87	0.0	9	13	12	6	se.	E. L. Ebbert.
Lead§	Lawrence	5,200	1	64.4	.....	88	20	30	25	37	1.87	.....	0.76	1.5	8	16	13	2	se.	E. F. Irwin.
Lemmon	Perkins	2,345	1	63.5[b]	.....	93	20	36[b]	25	40[b]	1.45	.....	0.75	0.0	4	.....	.....	.....	nw.	W. E. Lyman.
Marion	Turner	1,447	9	68.8	.....	92	1†	41	26	37	1.17	.....	0.50	0.0	4	8	19	4	se.	M. H. Dains.
Marston	Sully	.....	2	67.8	.....	102	20†	32	26	53	0.37	.....	0.14	0.0	2	18	9	4	se.	John S. Walker.
Mellette	Spink	1,300	15	67.6	− 2.5	95	12†	35	26	53[a]	2.95	+ 0.06	1.18	0.0	7	18	10	3	se.	Frank A. Howe.
Menno	Hutchinson	1,325	13	68.8	− 3.3	95	1	40	26	40	1.17	− 1.52	0.38	0.0	8	12	9	10	se.	J. H. Swanton.
Milbank	Grant	1,148	19	66.0	− 2.7	94	12	39	31	44	3.38	+ 0.59	0.67	0.0	9	11	4	16	nw.	I. T. Patridge.
Mitchell	Davison	1,312	16	67.6	− 3.1	94	1	39	26	41	2.98	+ 0.50	0.85	0.0	8	16	14	1	s.	C. W. Downey.
Murdo	Lyman	2,300	2	69.4	.....	98	29	39	25	45	1.35	.....	0.40	0.0	4	14	8	9	se.	L. C. Bode.
Oelrichs	Fall River	3,339	18	69.0[f]	− 2.0	100	19†	33	25	50[f]	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Strouse.
Orman	Butte	2,920	4	68.7	.....	99	11†	36	24	45[b]	0.95	.....	0.31	0.0	6	.....	.....	.....	e.	U. S. Reclamation Service.
Ottumwa	Stanley	.....	2	68.2	.....	102	20	38	25†	49	0.91	.....	0.35	0.0	4	21	6	4	se.	J. W. Brets.
Pierre	Hughes	1,572	18	71.2	− 1.9	100	29	45	25	40	0.60	− 1.41	0.52	0.0	3	11	14	6	e.	U. S. Weather Bureau.
Plankinton§	Aurora	1,528	16	.....	.....	.....	.....	.....	.....	.....	3.75	+ 1.28	1.32	0.0	7	8	21	2	se.	W. G. Andrews.
Pollock	Campbell	.....	4	66.0	.....	101	21	31	26	56[c]	1.09	.....	0.27	0.0	7	16	11	4	nw.	J. H. Jones.
Rapid City	Pennington	3,251	22	67.0	− 1.8	95	20	39	25	44	0.59	− 1.52	0.46	0.0	4	10	16	5	w.	U. S. Weather Bureau.
Redfield	Spink	1,295	12	65.4	− 4.3	95	12†	36	26	48	1.99	− 1.64	0.87	0.0	4	21	5	5	se.	A. S. Hall.
Rochford	Pennington	5,228	.....	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.20	T.	6	18	8	5	nw.	Mrs. M. E. Deffenbaugh.
Rosebud	Meyer	2,600	16	68.4	− 3.5	96	21	39	26	45[c]	1.09	− 0.77	0.42	0.0	8	.....	.....	.....	sw.	W. M. Ege.
Roslyn	Day	.....	4	64.8	.....	89	12	40	26†	40	5.40	.....	1.78	0.0	9	12	13	6	ne.	O. O. Floren.
Savoy	Lawrence	4,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. J. Hall.
Selby	Walworth	.....	2	67.8	.....	98	15†	41	26	40[a]	2.53	.....	0.82	0.0	7	16	12	3	nw.	Miss Gertrude Hall.
Sioux Falls	Minnehaha	1,400	19	70.1[d]	− 0.3	95	1	39[a]	25	36[a]	3.40	+ 0.37	1.25	0.0	7	9	18	4	se.	J. H. Bechtold.
Spearfish	Lawrence	3,647	20	65.6[f]	− 4.3	94	20	36	24	52[f]	1.44	− 0.08	0.52	0.0	5	14	10	7	.....	O. A. Martin.
Stephan	Hyde	1,840	6	68.0	.....	101	1	34	26	50	0.76	.....	0.20	0.0	8	14	13	4	se.	Rev. A. Mattingly.
Tama	Meade	.....	1	70.2	.....	101	11	30	26	53	0.48	.....	0.25	0.0	3	8	5	18	nw.	J. J. Daly.
Vale	Butte	2,765	2	67.8	.....	100	20	36	25	47	1.32	.....	0.75	0.0	4	23	3	5	e.	U. S. Reclamation Service.
Vermilion	Clay	1,222	9	71.0	.....	97	1	46	31	36	4.81	.....	3.13	0.0	5	13	12	6	se.	Prof. E. C. Perisho.
Waters' Ranch	Lawrence	4,000	.....	.....	.....	.....	.....	.....	.....	.....	2.35	.....	0.92	T.	7	15	7	9	nw.	George Waters.
Watertown	Codington	1,735	16	66.8	− 0.3	93	12	37	26	43	3.17	− 0.23	1.00	0.0	4	15	12	4	e.	Robert Q. Wood.
Wentworth	Lake	.....	17	67.5	− 1.9	93	1†	42	26†	36[a]	2.83	− 0.06	1.03	0.0	6	23	4	4	s.	R. C. Zimmerman.
White Lake	Aurora	1,646	1	.....	.....	.....	.....	.....	.....	.....	1.75	.....	0.82	0.0	7	9	11	11	sw.	Mrs. G. A. Rogers.
Winner	Tripp	2,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Rawson.
Yankton	Yankton	1,234	36	69.8	− 3.0	96	1	45	31	36	3.37	+ 0.25	1.81	0.0	9	7	19	5	ne.	U. S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	11	65.3	− 3.7	91	2	38	31	39	2.07	− 2.25	0.76	0.0	7	9	18	4	sw.	W. S. Campbell.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Akron	Washington	4,650	8								3.98		3.38	0.0	8					Ira M. Barnhouse.
Alma	Park	10,238	13								0.79		0.25	0.0	4	19	0	12	w.	F. H. Clark.
Arriba (near)	Lincoln	5,238	4			94	24†				1.01		0.55	0.0	10	17	13	1	s.	C. A. Creel.
Auldhurst	Teller	8,500									1.70		0.33	0.0	12	8	20	3	s.	Mrs. Alice A. Auld.
Boreas	Park	11,489									1.12		0.22	0.0	7	2	16	13	nw.	Frank Soper.
Boulder	Boulder	5,347	14																	O. H. Wangelin.
Burlington	Kit Carson	4,160	6	70.1		96	2†	37	25†	48	4.56		1.74	0.0	8	1	29	1	se.	W. P. Davis.
Cassells	Park	8,445									1.05		0.25	0.0	8	12	14	5	w.	Harriet M. Cassell.
Castle Rock	Douglas	6,220	18	66.6	− 0.1	91	21†	34	26	54	1.93	− 0.23	0.78	0.0	11					Geo. Tunnicliff.
Cheesman	Jefferson	6,890	7	65.2		87	24	35	25	47	1.50		0.75	0.0	3	12	19	0	sw.	J. G. Thornburg.
Cheyenne Wells	Cheyenne	4,279	18	72.1	− 0.8	95	20†	39	26	48	3.10	+ 0.77	1.32	0.0	6	14	13	4	se.	J. W. Adams.
Cope	Washington		12	71.6	− 1.8	97	20	34	22	44	3.83	+ 1.06	1.42	0.0	5	13	13	5	s.	A. A. Williams.
Corona	Grand	11,660	3	46.2		60	3†	27	25	27	0.58		0.30	0.0	2				w.	U. S. Weather Bureau.
Denver	Denver	5,272	38	70.6	+ 0.2	94	21	40	25	53	1.79	+ 0.45	0.73	0.0	9	4	26	1	s.	Do.
Edgewater	Jefferson	5,450	2	69.6		95	24	40	23†	52	2.10		0.97	0.0	10	19	12	0		Dr. N. P. Levin.
Estes Park Fish Hatchery	Larimer	8,000									1.40		0.78	0.0	8	2	25	4	w.	Gaylord H. Thomson.
Fort Collins	do	4,985	31	67.2	− 0.8	93	19	32	25	52	1.92	+ 0.20	1.03	0.0	12	6	21	4	nw.	Colorado Agri. Colle .e.
Fort Morgan	Morgan	4,319	12	71.4	− 1.0	102	20†	2J	25	59	2.08	+ 0.36	1.10	0.0	4	3	28	0	ne.	Della M. Scott.
Frances[4]	Boulder	9,300	5	60.6		81	2†	30	25	39				0.0		4	20	3	w.	D. A. Barry.
Fry's Ranch	Larimer	7,500		60.6		86	19†	26	25	55	0.92		0.45	0.0	6	17	12	2	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	9								0.27		0.10	0.0	8	5	22	4		H. L. Corbett.
Greeley	Weld	4,649	18	70.7	+ 0.4	97	21†	38	31	54	1.15	+ 0.19	0.58	0.0	6	13	12	6	sw.	Nelson Reynolds.
Grover	do	5,076		67.3		95	22	23	25	55	0.33		0.10	0.0	10	10	16	5	se.	Geo. M. Blake.
Hartsel	Park	7,670									1.47		0.47	0.0	11	18	11	2		Emily Kleinknecht.
Hawthorne	Boulder	6,000	2								2.60		1.04	0.0	11	22	8	1		B. E. Chesebro.
Holyoke (near)	Phillips	3,745	14								3.04		1.85	0.0	8	23	0	8	se.	A. C. Cauble.
Idaho Springs	Clear Creek	7,534	10	63.4	+ 1.4	83	20†	32	25	44	0.58	− 1.47	0.17	0.0	6	0	31	0	w.	J. J. Willis.
Keota	Weld	4,966																		G. J. Farrell.
Kessler	Boulder	7,720	3																	East Colo. Power Co.
La Porte	Larimer	5,053	19								1.47	+ 0.15	0.69	0.0	4					P. A. Taft.
Le Roy (near)	Logan	4,380	20								1.95	− 0.23	1.34	0.0	7					Chas. Green.
Longmont	Boulder	4,980	8																	Great Western Sugar Co.
Long's Peak (near)	Larimer	8,600	15	53.8	− 1.2	78	7	25	26	46	1.75	− 0.40	0.50	0.0	6	14	13	4	nw.	Enos A. Mills.
Moraine	do	7,775	20	60.3	+ 1.0	82	22	30	26	51	0.30	− 1.32	0.10	0.0	3	12	19	0	w.	J. D. Stead.
Platte Canon	Jefferson	5,492	11								2.02	+ 0.56	1.01	0.0	5	19	9	3	n.	Denver Union Water Co.
St. Cloud	Larimer	7,750	7																	Miss Guilla Sivers.
Sedgwick	Sedgwick	3,573	2	70.6		98	21†	31	25	58	3.76		1.60	0.0	9	17	11	3	se.	Dr. Edwin Lewis.
Sill Mine	Clear Creek	11,500	1	49.0		67	22	25	25	36	1.32		0.55	0.0	9	24	6	1	w.	Chas. F. Deininger.
Silver Lake	Boulder																			Clair V. Mann.
Spicer (near)	Larimer	8,700									0.38		0.20	0.0	5	18	5	8	sw.	Frank W. Murphy.
Sterling	Logan	3,892		69.9		96	23	32	25	53	2.05		1.25	0.0	6	3	26	2	se.	Great Western Sugar Co.
Waterdale	Larimer	5,206	7	68.4	+ 0.2	97	20	33	26	53	1.16	− 0.52	0.29	0.0	11					P. H. Boothroyd.
Westlake	Boulder		2																	C. R. Keeney.
Wray	Yuma	3,512	14	70.9	− 2.8	100	20	34	25	55	3.51	+ 1.48	2.09	0.0	5	11	18	2	se.	J. C. Tuomey.
Yuma	do	4,138	19																	Jean Deaken.
Nebraska.																				
Ainsworth	Brown	2,521	5	70.0		96	1†	40	25	41	2.32		0.58	0.0	8	1	23	7	sw.	John M. Cotton.
Albion	Boone	1,747	12	68.8[d]	− 2.5	95	22	39	26	45[d]	5.69	+ 2.74	0.92	0.0					s.	F. M. Weitzel.
Alliance	Boxbutte	3,968	15	68.5	− 2.5	98	21	30	25	53	1.20	− 0.57	1.00	0.0	2	18	10	3	s.	J. A. Keegan.
Alma	Harlan	1,939	13	71.9	− 3.8	100	21	37	26	40	4.66	+ 1.48	1.79	0.0	7	20	4	7	s.	W. A. Sharpnack
Anoka	Boyd		4	69.1		101	1	30	26	52	1.09		0.37	0.0	7	6	19	5	nw.	W. Whitla.
Arcadia	Valley	2,186	11								5.67	+ 2.22	1.93	0.0	10	10	10	11	se.	Jas. L. Owen.
Ashland	Saunders	1,100	27	73.8	− 1.2	99	1	47	26	40	5.55	+ 1.55	2.49	0.0	11	13	18	0	s.	Dr. A. S. von Mansfelder.
Ashton	Sherman	2,061	17								3.54	+ 0.54	1.74	0.0	12	17	5	9	s.	F. Rein.
Atkinson	Holt	2,108	4	67.7		96	1	42	26	39	3.42		1.02	0.0	8	12	14	5	nw.	Chas. J. Wilson.
Auburn	Nemaha	1,051	18	72.2	− 2.6	99	1	43	26†	43	6.82	+ 2.49	2.62	0.0	13	18	9	4	s.	J. R. Huffman.
Aurora	Hamilton	1,792	15	72.6	− 2.6	99	22	42	26	39	5.81	+ 2.17	3.50	0.0	11	12	12	7	se.	Chi., Burl. & Quincy R. R.
Beatrice	Gage	1,235	19	73.6	− 1.5	96	22	44	26	38	6.57	+ 2.86	1.19	0.0	11	20	6	5	sw.	Wm. S. Waxham.
Beaver City	Furnas	2,147	19	74.6	− 1.1	102	21	42	26	44	2.81	+ 0.34	1.41	0.0	7	9	14	8	ne.	T. M. Davis.
Bellevue	Sarpy	1,210	28	73.9		97	1	48	26	33	6.32	+ 3.33	4.20	0.0	10	16	6	9	se.	Prof. A. A. Tyler.
Benkelman	Dundy	2,968	13								2.80	+ 0.42	0.90	0.0	7	5	20	6	se.	R. D. Druliner.
Bertrand	Phelps	2,515	2								7.79		3.23	0.0	10	10	16	5		W. F. Dobbin.
Blair	Washington	1,122	15	72.3	− 1.1	98	1	48	10†	41	8.31	+ 4.24	4.64	0.0	12	15	13	3	sw.	H. H. Hahn.
Bloomfield	Knox		4	69.0		96	1	37	26	40	3.79		1.20	0.0	10	7	21	3	s.	Dr. L. C. Bleick.
Bradshaw	York	1,715	11								9.66	+ 4.53	3.08	0.0	11	9	20	2		E. C. Roggy.
Bridgeport	Morrill	3,658	14	69.2	− 2.7	101	29	30	25	54	0.20	− 1.40	0.20	0.0	1				se.	R. H. Willis.
Brokenbow	Custer	2,477	15	68.9	− 3.2	99	21	37	26	42	9.89	+ 6.39	2.89	0.0	10	8	4	19	n.	Chi., Burl. & Quincy R. R.
Burge	Cherry	2,674	4	68.8		97	1†	37	25	50	2.84		0.65	0.0	6	15	9	7	n.	H. A. Davis.
Cairo	Hall	1,951	1								2.56		1.40	0.0	7					Elliott Harrison.
Callaway	Custer	2,355	17	71.0	− 1.0	100	21	39	25	40	4.82	+ 1.55	1.50	0.0	10	18	7	6	s.	J. H. Evans.
Cambridge	Furnas	2,258	3	73.4		103	20†	38	26	42	2.41		0.93	0.0	7	15	10	6	ne.	Chas. Jensen.
Canton (near)	Sioux		1	65.2[e]		100	22	23	24	66[e]	0.56		0.29	0.0	4				se.	A. E. Hann.
Columbus	Platte	1,442	17	70.6	− 2.0	99	22	42	26	41	6.83	+ 3.20	1.65	0.0	14	15	5	11	nw.	C. C. Gray.
Cozad	Dawson	2,496	2								3.79		1.20	0.0	8				s.	A. A. Luttin.
Creighton	Knox	1,600	13																	W. L. Kirk.
Crete	Saline	1,368	27	73.6	+ 0.1	95	1†	45	26	39	5.82	+ 2.25	2.31	0.0	10	12	8	11	s.	Doane College.
Culbertson	Hitchcock	2,565	23	73.4		104	21	40	24	44	3.46	+ 0.77	1.12	0.0	7	10	12	9	nw.	J. H. Corrick.
Curtis	Frontier	2,553	13	71.8	− 3.4	95	21†	36	26	44	5.59	+ 2.74	2.50	0.0	8	5	24	2	s.	Dr. S. R. Razee.
David City	Butler	1,619	21	71.1	− 0.4	93	1†	45	26	32	6.84	+ 3.19	2.60	0.0	12	8	16	7	se.	S. Clingman.
Dawson	Richardson	945	17																	Mrs. E. I. Atkinson.
Dubois	Pawnee	1,074	5								4.53		1.66	0.0	11	20	5	6	se.	O. M. Backus.
Ellis	Gage	1,430	5								3.82		1.55	0.0	7					D. J. Wood.
Elmcreek	Buffalo	2,268	2								4.28		2.25	0.0	5					E. L. Sutton.
Elsie	Perkins	3,382	2								1.64		0.91	0.0	8					J. F. Brittain.
Enderslake	Brown		1																	G. W. Chappell.
Ewing	Holt	1,888	18	69.2		101	1	37	26	43	3.15	+ 0.28	1.35	0.0	12					G. H. Benson.
Fairbury	Jefferson	1,316	35	73.6	− 2.1	97	1†	42	26	39	4.46	+ 1.22	1.21	0.0	13	10	15	6	se.	W. F. Cramb.
Fairmont	Fillmore	1,641	17	70.8	− 2.7	95	1†	42	26	41	5.85	+ 2.26	3.55	0.0	9	12	6	13	s.	Chi., Burl. & Quincy R. R.
Fort Robinson	Dawes	3,764	26	67.0	− 3.3	98	19†	28	25	58	0.86	− 0.67	0.52	0.0	5	21	2	8	sw.	Post Hospital.
Franklin	Franklin	1,820	19																	Jesse H. Naden.
Fremont	Dodge	1,203	30	73.2	+ 0.3	100	1	43	26	43	10.14	+ 6.15	2.50	0.0	11	7	19	5	nw.	Ernest Hahn.
Fullerton	Nance	1,629	8	71.6		97	1†	42	26	40	11.29		4.80	0.0	11	12	14	5	nw.	Dr. F. W. Johnson.
Geneva	Fillmore	1,633	20	72.1	− 2.4	99	22	43	26	34	6.31	+ 2.07	2.73	0.0	10	19	3	9	se.	F. M. Flory.
Genoa	Nance	1,584	35	71.6	− 1.7	100	3	42	7†	47	6.67	+ 3.70	2.10	0.0	10	15	12	4	s.	F. W. Parsons.
Gordon	Sheridan	3,350	8	65.5		97	20	27	25	51	1.40		0.63	0.0	3				se.	G. F. Williams.
Gosper	Gosper		8								6.53		4.00	0.0	7	10	15	6	s.	E. H. Stoll.
Gothenburg	Dawson	2,557	16	70.8	− 2.6	102	21	39	26	44	4.07	+ 0.78	0.90	0.0	10	11	8	12	se.	Dr. W. J. Bartholomew.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Cont'd.																				
Grand Island	Hall	1,860	19	71.2	− 2.7	96	22	40	26	36	3.78	− 0.02	1.30	0.0	12	6	14	11	se.	E. A. Barnes.
Grant	Perkins	3,405	7	70.1		103	2†	30	25	56	1.67		0.85	0.0	4	10	19	2	se.	Cyrus Carver.
Greeley	Greeley	2,021	15	70.0		96	1†	41	26	37	10.02	+ 7.16	2.95	0.0	14	6	22	3	se.	W. E. Morgan.
Guiderock	Webster	1,646	10								5.53	+ 2.43	2.00	0.0	8	7	16	8	se.	J. S. Marsh.
Haigler	Dundy	3,258	15								4.29	+ 1.83	2.14	0.0	6	11	14	6		Chi., Burl. & Quincy R. R.
Halsey§	Thomas	2,695	8	70.0		98	21	38	26	42	4.00		1.17	0.0	11	26	4	1	se.	U. S. Forest Service.
Hartington	Cedar	1,309	19	70.0	− 1.1	100	1	42	26	40	5.20	+ 1.45	2.20	0.0	10	13	6	12	nw.	D. E. Ewing.
Harvard	Clay	1,812	21	70.3	− 3.1	95	1†	40	26	39	5.27	+ 2.00	1.77	0.0	12	12	13	6	se.	Dr. J. T. Fleming.
Hastings	Adams	1,932	20	71.2	− 2.9	101	21	43	26	37	6.40	+ 2.84	2.90	0.0	9	18	9	4	se.	Chi., Burl. & Quincy R. R.
Hayes Center	Hayes		17	70.6		101	21	34	25	51	2.95	− 0.24	1.44	0.0	6	15	13	3	se.	C. A. Ready.
Hay Springs	Sheridan	3,821	23	66.6	− 2.7	97	20	26	25	55	0.60	− 1.37	0.60	0.0	1	14	15	2	s.	A. Kadlecek.
Hebron	Thayer	1,458	25	71.5	− 3.1	93	1	41	26	32	5.16	+ 1.75	1.75	0.0	11					Dr. C. M. Easton.
Hemingford	Boxbutte	4,256	1								0.62		0.27	0.0	5					A. S. Enyeart.
Hendley	Furnas	2,231	6								3.06		0.76	0.0	7					T. L. Jones.
Hillside	McPherson		1	67.9		97	11†	30	26	51	2.96		1.11	0.0	10	16	8	7	se.	Mrs. M. R. Lloyd.
Holdrege	Phelps	2,324	18	71.0	− 4.1	101	21	42	26	40	5.73	+ 2.62	2.80	0.0	12	15	8	8	se.	Chi., Burl. & Quincy R. R.
Hooper§	Dodge	1,228	13	71.9	− 1.6	97	1†	43	26	40	9.97	+ 5.63	2.85	0.0	12				se.	Dr. W. Howard Heine.
Imperial	Chase	3,278	20	71.1	− 2.6	101	2	34	25	47	2.82	+ 0.10	1.05	0.0	7	6	15	10	se.	Robt. Malcolm.
Kearney	Buffalo	2,146	20	72.0	− 3.0	98	2†	39	26	43	3.44	+ 0.41	2.05	0.0	9	16	13	2	ne.	N. C. Dunlap.
Kimball	Kimball	4,697	21	68.2	− 1.8	97	21†	26	25	58	0.52	− 0.90	0.18	0.0	4	13	17	1	s.	F. J. Bellows.
Kirkwood	Rock		15	68.6	− 3.0	100	1	40	26	41	5.30	+ 1.73	1.15	0.0	13	13	9	9	se.	Mrs. C. Arter.
Kowanda	Deuel		2								0.83		0.58	0.0	4					Geo. W. Hulse.
Lexington	Dawson	2,385	21	70.6	− 1.7	99	21	36	26	47	3.72	+ 0.64	1.08	0.0	9	24	0	7	se.	Robt. Chadwick.
Lincoln	Lancaster	1,189	31	73.5	− 0.8	98	22	48	26	35	14.21	+10.50	8.38	0.0	10	7	10	14	s.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	12	70.2	− 0.1	96	2†	33	25	47	1.41	− 0.49	0.80	0.0	5	16	13	2	e.	R. T. Kidney.
Loup	Sherman	2,067	16	69.8	− 3.1	96	2	40	26	39	5.07	+ 1.25	1.53	0.0	11	13	11	7	se.	E. S. Hayhurst.
Loyal	Custer		2								3.15		0.91	0.0	5	17	11	3	n.	C. H. Cass.
McCook	Redwillow	2,506	15	71.8	− 5.2	100	20†	40	25†	47	2.93	+ 0.38	1.20	0.0	7	23	5	3	se.	C. G. Coglizer.
McCool Junction	York	1,575	12								6.12	+ 2.62	2.59	0.0	10					L. L. Slagle.
Madison	Madison	1,585	17	69.2	− 2.7	95	22	35	31	40	5.28	+ 1.84	1.23	0.0	9	12	11	8	se.	Dr. F. A. Long.
Marquette	Hamilton	1,830	31								6.86	+ 3.71	2.03	0.0	13					John Ellis.
Mason City	Custer	2,257	9								5.86	+ 2.14	2.45	0.0	6					J. A. Amsberry.
Minatare	Scottsbluff	3,825	1								0.14		0.14	0.0	1				se.	Anthony Kennedy.
Minden	Kearney	2,169	33	71.0	− 2.4	98	21	39	26	36	4.24	+ 0.62	1.82	0.0	11	8	11	12	s.	Joel Hull.
Mitchell	Scottsbluff		3	68.8		99	19	27	25	52	0.78		0.42	0.0	3	20	10	1	e.	U. S. Reclamation Service.
Morrill	do		1																	Edwin K. Wieland, jr.
Nebraska City	Otoe	941	33	73.4	− 0.8	95	1†	43	26	40	7.73	+ 4.02	1.82	0.0	10	18	6	7	s.	Chi., Burl. & Quincy R. R.
Norfolk	Madison	1,532	27	69.5	− 2.6	100	22	39	26	44	4.58	+ 0.74	1.16	0.0	11	20	7	4	s.	Dr. P. H. Salter.
North Loup	Valley	1,961	22	70.2	− 2.2	98	2	41	26	42	7.33	+ 4.47	1.93	0.0	10	9	18	4	s.	W. G. Rood.
North Platte	Lincoln	2,841	36	69.8	− 2.4	99	21	36	25	43	2.02	− 0.44	0.58	0.0	12	12	9	10	s.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	23	68.4	− 3.2	95	1	41	26	39	4.17	+ 1.26	1.10	0.0	12	7	8	16	s.	G. S. Clingman.
Odell	Gage	1,278	16								3.62	− 0.80	1.30	0.0	8	12	1	18		Chi., Burl. & Quincy R. R.
Omaha	Douglas	1,103	40	74.0	− 0.4	96	22	53	26	32	4.76	+ 1.14	2.40	0.0	12	12	9	10	s.	U. S. Weather Bureau.
Ord	Valley	2,062	16								5.16	+ 2.08	1.00	0.0	10	9	13	9	s.	James Milford.
Orleans	Harlan	1,993	2																	James McGeachin.
Osceola	Polk	1,644	12	71.2†		98	2†	44	26	41†	11.06	+ 7.00	6.50	0.0	8				s.	G. T. Ray.
Palisade	Hitchcock		1								2.48		0.95	0.0	5					E. E. Young.
Palmyra**§	Otoe	1,142	15	73.4	− 1.2	96	16†	48	26		12.65	+ 8.78	6.06	0.0	9	16	12	3	s.	Thomas Coles.
Pawnee City	Pawnee	1,175		72.4		95	1	41	26	42	6.52	+ 2.68	3.45	0.0	10	19	5	7	s.	Frank A. Barton.
Paxton	Keith		1								2.96		1.01	0.0	11					H. D. Lute.
Plymouth	Jefferson	1,419	6	72.7		97	1	44	26	42	4.95		1.80	0.0	12	8	14	9	se.	John Ruppel.
Purdum	Blaine		10	68.5		98	21	37	26	46	3.33	+ 0.09	0.73	0.0	12	18	8	5	se.	T. C. Jackson.
Ravenna	Buffalo	2,028	33	71.0	− 2.0	99	21	38	26	42	3.73	+ 0.42	1.70	0.0	12	20	5	6	s.	H. G. Smith.
Redcloud	Webster	1,687	18	73.3	− 2.5	102	21	36	26	45	2.69	− 0.10	1.15	0.0	10	17	6	8	nw.	Chas. S. Ludlow.
St. Libory	Howard	1,887	15								5.05	+ 1.60	1.30	0.0	7	7	19	5	se.	W. I. Meader.
St. Paul	do	1,796	16	72.1	− 2.6	96	2†	42	26	39	4.56	+ 0.95	1.62	0.0	9	17	12	2	nw.	Paul Anderson.
Santee	Knox		22	71.2	− 2.9	98	1	42	26	42	2.65	− 0.08	1.95	0.0	4	13	8	10	se.	Nat H. Neff.
Sargent	Custer	2,339	13	67.5*		97	21	37	25	46*	6.47	+ 3.15	2.30	0.0	10				se.	Jas. L. Ferguson.
Schuyler	Colfax	1,357	17	71.8		100	1	41	26	45	8.99	+ 4.86	3.41	0.0	12	10	15	6	s.	John T. Sumner.
Scottsbluff	Scottsbluff	3,888	4	70.4		100	19	30	25	58	0.24		0.12	0.0	2	20	10	1	se.	A. B. McCoskey.
Seward	Seward	1,435	20	71.8	− 3.2	95	6†	48	11	42	10.85	+ 6.63	5.32	0.0	9	13	9	9	e.	Chi., Burl. & Quincy R. R.
Sheridan	Wheeler		2								3.17		1.12	0.0	11	15	12	4	se.	J. C. Harris.
Sidney	Cheyenne	4,090	18								2.11	+ 0.23	0.75	0.0	8	23	5	3	se.	John P. Fischer.
Springview	Keyapaha		17	68.2	− 3.5	96	1	40	25	38	6.85	+ 3.70	1.50	0.0	10	9	14	8	se.	C. L. Phelps.
Stanton	Stanton	1,472	19	69.7	− 2.3	96	1	39	26	40	5.05	+ 1.71	1.25	0.0	10	13	16	2	s.	Alfred Pont.
Stratton	Hitchcock	2,804	15								4.79	+ 2.18	1.10	0.0	7					Miss Stella Vennum.
Superior	Nuckolls	1,574	25								6.94	+ 3.90	2.25	0.0	7					F. V. Bishop.
Tablerock	Pawnee	1,023	22								5.81	+ 2.47	2.38	0.0	12	15	13	3	s.	E. D. Howe.
Tecumseh	Johnson	1,113	32	72.3	− 2.4	100	1	41	26†	48	5.90	+ 2.12	3.20	0.0	5	12	11	8	s.	Chi., Burl. & Quincy R. R.
Tekamah	Burt	1,060	20	72.1	− 1.1	98	1	44	26	42	8.30	+ 4.38	5.01	0.0	12	10	19	2	s.	Dr. A. D. Nesbit.
Tobias	Saline	1,597	1	74.2		97	1†	47	26	39	6.77		2.81	0.0	11	11	13	7	s.	Frank Ainsworth.
Turlington	Otoe	1,214	18	73.6	− 1.3	97	1	50	26†	34	6.60	+ 2.83	3.55	0.0	7	19	5	7	sw.	Wm. N. Hunter.
University Farm§	Lancaster		25	73.6		97	22	44	26	38				0.0	9	13	13	5		S. W. Perin.
Valentine	Cherry	2,613	22	68.0	− 3.3	96	21	38	25	36	4.95	+ 2.13	1.91	0.0	11	11	19	1	s.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	8								9.55		4.65	0.0	9	13	16	2		W. T. Mauck.
Wakefield	Dixon	1,387	16	70.4	− 1.5	100	1	36	26	49	3.46	− 0.24	1.30	0.0	9	16	13	2	s.	I. H. Weaver.
Walthill	Thurston		8																	H. L. Keefe.
Watertown	Buffalo	2,299	5								3.12		0.95	0.0	6	12	16	3	nw.	R. E. Swift.
Wauneta	Chase		11								2.64	− 0.61	0.92	0.0	5					C. D. Fuller.
Weepingwater	Cass	1,080	33	74.2		100	1	41	26	46	10.00	+ 5.91	6.79	0.0	10	20	3	8	s.	S. W. Orton.
Wellfleet (near)	Lincoln		1								2.60		1.45	0.0	5					Mrs. Eli Votaw.
Westpoint	Cuming	1,313	24																	J. C. Elliott
Wisner	do	1,380	14								5.21	+ 1.71	1.73	0.0	10	22	1	8	sw.	F. C. Evans.
Woodlawn	Lancaster		5								11.42		5.14	0.0	7	10	9	12	n.	H. C. Kendall.
York	York	1,606	21	72.6	− 2.9	99	22	42	26	43	8.72	+ 5.24	4.85	0.0	10	17	7	7	s.	A. T. Glauque.
Iowa.																				
Afton§	Union	1,212	16	72.5	− 1.1	93	22	48	27	30	2.45	− 1.98	0.88	0.0	7	13	13	5	sw.	N. W. Rowell.
Allerton§	Wayne	1,513	8	73.0	+ 0.1	98	23	44	26	33	0.82	− 6.00	0.50	0.0	8	20	4	7	sw.	Mrs. Geo. Shriver.
Alton	Sioux	1,305	5	70.3		98	1	39	26	40	4.43		1.28	0.0	8	13	12	6	sw.	W. S. Slagle.
Atlantic	Cass	1,164	19	73.2	+ 1.9	97	1†	44	26	36	11.22	+ 7.74	4.98	0.0	12	8	5	18	sw.	Thos. H. Whitney.
Audubon§	Audubon	1,301	16	70.8	− 1.0	95	1	45	26	35	7.85	+ 4.13	1.75	0.0	9	11	5	15	sw.	Geo. E. Kellogg.
Bedford§	Taylor		10	73.9	0.0	104	22	37	26	43	1.76	− 3.30	0.85	0.0	7	19	3	9	se.	E. E. Healy.
Centerville	Appanoose										1.69		1.60	0.0	3	22	8	1	s.	Gordon Peacock, jr.
Charitons§	Lucas	1,042	15	73.2	+ 0.1	98	22	40	26	41	0.37	− 4.63	0.25	0.0	2	25	0	6	se.	C. C. Burr.
Clarinda	Page	1,009	20	69.6	− 4.6	96	24	41	26	42	2.03	− 2.00	0.69	0.0	10	15	2	14	ne.	A. S. Van Sandt.
Corning§	Adams	1,117	18	71.8	− 0.7	96	22	39	26	39	4.87	+ 0.66	1.35	0.0	7	19	3	9	se.	Jerome Smith.
Corydon§	Wayne	1,101	17	74.0	+ 0.4	97	23	43	26	33	0.45	− 3.87	0.20	0.0	4	13	12	6	se.	Clara Miller.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa—Cont'd.																			
Council Bluffs	Pottawattamie																		B. W. Crossley.
Creston	Union	1,312	5	71.2	.....	96	1†	41	26	43	5.15	.....	1.55	0.0	8	12	4	15	ne.	O. J. Colby.
Cumberland	Cass	.....	10	.....	.....	.....	.....	.....	.....	.....	7.10	+ 3.12	3.13	0.0	8	21	1	9	sw.	J. H. Reppert.
Denison	Crawford	1,180	16	71.6	− 0.3	97	1	42	26	39	9.75	+ 5.99	2.33	0.0	10	19	9	3	s.	W. C. Van Ness.
Elliott	Montgomery	.....	5	72.8	.....	94	1	46	26	34	8.70	.....	5.70	0.0	11	16	14	1	s.	Henry Barnes.
Greenfield	Adair	.....	18	72.0	− 0.4	96	1	44	26	35	5.90	+ 2.36	2.50	0.0	8	13	18	0	sw.	R. B. Oldham.
Harlan‖	Shelby	1,192	11	71.6	− 0.6	97	1	43	26	41	9.58	+ 5.36	4.42	0.0	8	8	16	7	s.	C. A. Reynolds.
Hopeville	Clarke	.....	19	73.0	− 0.2	96	22	44	26	34	1.57	− 2.24	0.59	0.0	6	10	12	9	.....	M. T. Ashley.
Inwood‖	Lyon	1,474	6	69.0	.....	94	2	42	31	40	4.46	.....	2.15	0.0	7	18	9	4	s.	F. B. Hanson.
Lamoni	Decatur	.....	3	73.4	.....	95	22†	44	26†	35	1.43	.....	0.37	0.0	8	18	11	2	se.	T. J. Fitzpatrick.
Larrabee	Cherokee	1,266	20	69.0	− 2.2	94	1	41	26	36	3.00	− 0.48	0.97	0.0	7	19	10	2	sw.	H. B. Strever.
Le Mars‖	Plymouth	1,224	14	68.8	− 2.7	90	1	42	26	31	3.63	+ 0.75	1.36	0.0	7	4	27	0	sw.	G. A. C. Clarke.
Lenox‖	Taylor	1,250	15	73.0	+ 0.1	95	22	43	26	33	2.92	−1.20	0.98	0.0	7	18	8	5	s.	J. L. Hurley.
Leon	Decatur	1,120	8	73.6	.....	96	22	45	26	32	1.38	− 4.56	0.70	0.0	4	19	6	6	se.	Morris Gardner.
Little Sioux‖	Harrison	.....	5	72.7	.....	100	1	44	26	44	6.99	.....	3.60	0.0	11	12	11	8	sw.	Geo. H. Gibson.
Logan‖	....do	928	43	72.4	− 0.3	99	1	42	26	41	6.00	+ 2.26	2.65	0.0	8	9	16	6	nw.	Glenn H. Stern.
Massena‖	Cass	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Smeltzer.
Mount Ayr‖	Ringgold	1,236	17	74.0	0.0	99	22	47	26†	36	2.52	− 1.23	1.45	0.0	9	13	10	8	nw.	A. F. Beard.
Odebolt‖	Sac	1,356	13	72.4	− 1.3	98	1	42	26	39	4.67	+ 1.07	1.28	0.0	9	17	11	3	.....	E. Starner.
Onawa‖	Monona	1,051	10	72.8	− 1.4	95	1†	48	26	35	6.79	+ 1.65	2.95	0.0	10	18	7	6	s.	C. G. Perkins.
Pacific Junction‖	Mills	960	11	71.8	− 1.7	96	1†	39	26	42	10.18	+ 6.35	7.98	0.0	12	8	23	0	s.	H. H. McCartney.
Rock Rapids‖	Lyon	1,358	11	71.4	+ 0.9	96	1†	40	26	36	1.48	− 0.95	0.68	0.0	3	.....	.....	.....	.....	W. C. Wyckoff.
Sheldon‖	O'Brien	1,422	10	68.5	− 2.8	98	2	40	26	42	4.87	+ 1.19	2.00	0.0	6	17	10	4	s.	Dr. A. W. Beach.
Sibley	Osceola	1,212	17	66.8	− 2.1	92	1	39	26†	40	2.07	− 1.59	0.82	0.0	8	9	16	6	sw.	H. G. Doolittle.
Sioux Center‖	Sioux	.....	11	69.0	− 2.1	94	1	40	26	32	2.83	− 0.80	1.22	0.0	6	15	11	5	s.	J. de Ruyter.
Sioux City	Woodbury	1,135	21	70.2	− 2.4	93	1	44	26	32	2.76	− 0.24	1.25	0.0	9	12	10	9	s.	U. S. Weather Bureau.
Thurman‖	Fremont	.....	13	72.9	− 0.9	95	1	40	26	42	7.37	+ 2.98	3.35	0.0	11	11	11	9	sw.	C. R. Paul.
Washta‖	Cherokee	1,157	12	70.8	.....	98	1	36	26	40	4.36	+ 1.58	2.45	0.0	8	21	6	4	s.	H. L. Felter.
Woodburn‖	Clarke	961	11	71.6	.....	98	16†	36	26	43	1.32	− 4.26	0.85	0.0	5	18	8	5	sw.	C. B. McDonough.
Kansas.																				
Abilene	Dickinson	1,157	15	.....	.....	.....	.....	.....	.....	.....	5.54	+ 2.76	2.20	0.0	9	12	13	6	s.	T. W. Sherman.
Agricultural College	Riley	1,100	52	73.9	− 2.9	96	1†	43	26	38	10.70	+ 7.08	4.25	0.0	12	17	7	7	sw.	Prof. J. O. Hamilton.
Alton	Osborne	1,651	8	76.0	.....	110	21	33	26	47	2.14	− 0.44	0.62	0.0	8	12	10	9	se.	H. A. Storer.
Atchison	Atchison	973	19	75.4	− 0.4	100	1	46	26	36	3.21	− 1.32	1.70	0.0	7	20	6	5	s.	Prof. M. F. Troxell.
Baker	Brown	1,182	10	71.4	.....	95	1†	43	26	34	3.29	.....	1.25	0.0	9	9	0	22	s.	E. A. Bastien.
Beloit	Mitchell	1,383	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Houghton.
Blakeman	Rawlins	2,894	13	71.5	.....	102	2	35	26	47	4.00	+ 1.42	2.95	0.0	6	23	1	7	se.	C. L. Henderson.
Blue Rapids	Marshall	1,105	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Norton.
Centralia	Nemaha	1,256	1	72.2	.....	94	21†	45	26	32[c]	6.99	.....	3.27	0.0	11	20[a]	5[a]	5[a]	se.	L. E. Hazen.
Chapman	Dickinson	1,113	6	75.8	.....	98	24	44	26	39	8.02	.....	2.20	0.0	11	16	9	6	s.	Dr. R. McShea.
Clay Center	Clay	1,203	9	73.4	.....	101	21	41	26	50	8.48	.....	2.95	0.0	9	11	10	10	s.	O. L. Slade.
Colby	Thomas	3,138	19	73.3	− 1.3	104	2	41	25†	46	1.25	− 1.20	0.58	0.0	5	18	9	4	se.	R. M. Chelf.
Concordia	Cloud	1,398	26	73.6	− 2.6	98	21	44	26	35	7.57	+ 5.76	3.52	0.0	12	7	18	6	s.	U. S. Weather Bureau.
Densmore	Norton	2,200	1	75.1	.....	108	21	38	26	50[a]	2.17	.....	0.70	0.0	8	11	16	4	se.	F. S. Griffith.
Dresden	Decatur	2,731	16	72.8	− 2.6	102	2	41	26	49	3.60	+ 0.72	1.34	0.0	8	14	4	13	se.	Jacob Bock.
Ellsworth	Ellsworth	1,537	6	73.9	.....	100	21†	40	26	39[a]	4.68	.....	1.80	0.0	10	10	11	10	s.	Geo. Seits.
Enterprise	Dickinson	1,144	8	73.2	.....	100	22	44	26	42	7.96	+ 5.18	2.57	0.0	10	9	15	7	s.	H. O. Wagner.
Eskridge	Wabaunsee	1,412	4	74.4	.....	96	1†	50	26†	32	6.22	.....	1.82	0.0	12	16	11	4	s.	Geo. D. West.
Farnsworth	Lane	2,850	9	78.0[f]	.....	105	22	51[k]	23	50[k]	2.34	.....	0.50	0.0	11	22	4	5	s.	C. M. Jennison.
Ft. Scott	Bourbon	857	35	77.3	− 1.1	98	30	44	27	37	3.46	− 0.38	1.08	0.0	8	15	5	11	se.	E. A. Shaver.
Frankfort	Marshall	1,146	16	73.8	− 3.3	100	22	41	26	45	7.70	+ 2.47	3.45	0.0	11	12	17	2	ne.	E. C. Dunham.
Garnett	Anderson	950	4	.....	.....	100	24	.....	.....	.....	4.15	.....	1.65	0.0	8	9	20	2	s.	D. D. Judy.
Goodland	Sherman	3,687	3	72.4[e]	.....	100	2	48	25	36[e]	4.76	.....	2.12	0.0	6	11[e]	2[e]	13[e]	s.	G. C. Calvert.
Gove	Gove	2,750	21	.....	.....	109	21	39	26	.....	1.15	− 0.91	0.33	0.0	6	14	14	3	se.	Jesse Royer.
Hanover	Washington	1,225	13	74.5	.....	99	21†	43	26	38	6.03	+ 1.60	2.33	0.0	10	17	7	7	s.	August Jaedicke, jr.
Harrison	Jewell	1,804	9	72.7	.....	99	21	36	26	46	7.23	.....	2.67	0.0	11	15	8	8	se.	Mahlon Tegley.
Hays	Ellis	2,000	42	73.8	− 3.1	105	22†	36	26	51	3.92	+ 0.89	0.87	0.0	12	8	6	17	se.	G. K. Helder.
Hill City	Graham	2,134	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Mort.
Horton	Brown	1,188	21	74.2	− 1.4	97	21	48	27	33	4.65	+ 0.53	2.13	0.0	8	13	13	5	s.	Mrs. S. C. Belden.
Hoxie	Sheridan	2,700	12	76.6[d]	+ 0.2	108	20†	48	24	45[d]	1.85	− 0.79	0.65	0.0	6	16[e]	5[e]	5[e]	se.	C. T. Dallam.
Jewell	Jewell	1,540	5	74.4	.....	103	1	36	26	49	5.36	.....	4.07	0.0	7	14	9	8	s.	C. A. Shinn.
Lawrence	Douglas	997	42	73.6	− 3.7	94	1	49	26	27	7.14	+ 2.86	2.44	0.0	9	10	14	7	sw.	Prof. H. P. Cady.
Lebanon	Smith	1,812	12	74.8	.....	104	21	42	26	41	3.60	+ 1.00	1.08	0.0	6	21	6	4	s.	Earl V. Bower.
Lindsborg	McPherson	1,333	4	.....	.....	.....	.....	.....	.....	.....	3.01	.....	1.20	0.0	8	12	1	18	s.	N. S. Weddle.
Mankato	Jewell	1,784	1	73.0	.....	102	21†	42	25	50	4.31	.....	1.25	0.0	10	20	7	4	se.	R. M. Cauthorn.
Minneapolis	Ottawa	1,259	20	75.2	− 2.0	100	24	43	26	39	3.99	+ 0.85	0.96	0.0	9	18	5	8	se.	J. L. Steele.
Moran	Allen	1,098	14	77.6	− 0.4	98	1	47	26	33	4.06	− 0.89	1.12	0.0	5	13	15	3	se.	C. J. Norton.
Natoma	Osborne	1,834	1	.....	.....	.....	.....	.....	.....	.....	2.35	.....	0.80	0.0	5	24	6	1	se.	C. O. Hunt.
Norton	Norton	2,284	12	74.2	− 0.4	106	21	40	26	52	1.08	− 1.36	0.64	0.0	5	12	17	2	se.	Sim Sleffel.
Oberlin	Decatur	2,539	23	.....	.....	.....	.....	.....	.....	.....	4.13	+ 1.24	2.55	0.0	9	22	6	3	se.	I. K. Huber.
Oketo‖	Marshall	1,194	2	74.4	.....	96	1†	42	26	40	4.52	.....	1.63	0.0	11	7	16	8	se.	J. A. Church.
Olathe	Johnson	1,032	15	75.1	− 1.5	97	1	46	26†	34	5.09	− 0.38	1.15	0.0	9	10	11	10	se.	Dr. S. B. S. Wilson.
Osage City	Osage	1,081	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. C. White.
Ottawa	Franklin	926	16	75.2[f]	− 1.0	97	22†	42	27	40[f]	6.71	+ 1.88	1.98	0.0	9	.....	.....	.....	.....	Herbert F. McDougal.
Phillipsburg	Phillips	1,939	19	.....	.....	108	21†	37	26	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. E. Bailey.
Pleasanton	Linn	862	8	75.8	.....	96	24	45	27	32	2.33	.....	0.95	0.0	7	20	8	3	se.	B. F. Blaker.
Russell	Russell	1,834	11	74.2	− 3.2	102	22	38	26	38	4.48	+ 1.93	1.45	0.0	8	10	11	10	s.	Robert Brebner.
Russell Springs	Logan	.....	.....	74.4	.....	106	2	36	26	44	3.24	.....	1.75	0.0	5	18	10	3	se.	D. J. Hutto.
St. Francis	Cheyenne	3,288	2	72.1	.....	103	2	33	26	52	4.10	.....	2.80	0.0	5	8	18	5	se.	J. E. Uplinger.
Salina	Saline	1,227	26	75.0	− 4.2	102	22	43	26	41	4.73	+ 1.80	1.60	0.0	8	.....	.....	.....	s.	Prof. A. W. Jones.
Scott	Scott	2,971	4	74.8	.....	102	2	41	26	46	6.49	.....	2.86	0.0	6	16	12	3	s.	J. P. Loughran.
Smith Center	Smith	1,800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Nelson.
Topeka	Shawnee	997	24	74.6	− 1.4	95	21	50	27	29	8.00	+ 3.71	2.17	0.0	12	15	10	6	se.	U. S. Weather Bureau.
Valley Falls	Jefferson	913	11	74.6	− 0.8	94	1	44	26	31	3.81	− 0.38	1.88	0.0	8	18	7	6	se.	Miss Nettie Maxwell.
Vinland‖	Douglas	880	1	74.2	.....	96	2	42	26†	34	6.67	.....	1.80	0.0	10	9	8	14	se.	A. Schick.
Wakeeney	Trego	2,456	27	75.4	− 1.6	107	21	40	26	43	2.30	0.00	0.62	0.0	10	19	9	3	s.	A. S. Peacock.
Wallace	Wallace	3,303	40	73.1	.....	103	2	38	26	43[a]	2.52	+ 0.55	1.32	0.0	6	2	24	5	se.	M. T. Griggs.
Wamego‖	Pottawatomie	1,002	17	.....	.....	.....	.....	.....	.....	.....	8.50	+ 3.86	2.80	0.0	9	8	13	10	ne.	M. L. Stone.
Missouri.																				
Amoret	Bates	850	1	77.0	.....	101	24	44	27	39	2.03	.....	0.88	0.0	4	11	14	6	ne.	Darby Fruit Farm.
Appleton City	St. Clair	853	20	76.0	− 1.6	100	22	45	27	39	2.14	− 1.95	0.61	0.0	10	13	17	1	n.	T. C. Brown.
Arlington	Phelps	695	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George V. Randolph.
Arthur	Vernon	767	18	76.6	+ 0.5	98	22	42	27	40	2.34	− 1.78	0.87	0.0	8	14	15	2	se.	J. T. Armstrong.
Avalon	Livingston	.....	25	74.4	− 2.4	101	23	46	26	36	2.52	− 1.49	1.65	0.0	4	23	7	1	sw.	F. G. Ashbaugh.
Bagnell	Miller	594	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Brockman.
Bethany	Harrison	881	20	74.5	+ 0.3	93	22†	44	26†	36	4.10	− 0.08	2.01	0.0	5	26	3	2	se.	W. H. Skinner
Bolivar	Polk	1,070	22	74.4	− 2.5	98	22	43	27	37	10.07	+ 6.71	4.21	0.0	10	18	10	3	sw.	E. Waltz.

TABLE 1.—*Climatological data for August, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Missouri—Cont'd.																				
Boonville	Cooper	600	34																	C. Randecker.
Brunswick‡‖	Charitan	652	32	74.8	− 0.6	100	23†	47	26	38	2.23	− 1.79	0.91	0.0	6	10	4	17	se.	Louis Benecke.
Clinton	Henry	800	24	77.0	.....	101	23†	47	27	37	1.89	− 1.52	0.74	0.0	5	23	7	1	e.	Dr. G. W. Menees.
Columbia	Boone	784	21	74.4	− 0.3	98	24	46	27	32	4.40	+ 1.36	2.31	0.0	8	19	5	7	s.	U. S. Weather Bureau.
Conception‖	Nodaway	982	26	74.8	+ 1.0	100	22	47	26	32	1.28	− 2.70	0.41	0.0	8	10	13	8	sw.	Fr. Adhelm Hess.
El Dorado Springs	Cedar	750	5	77.4	.....	100	22†	44	26	38[a]	3.78	.....	1.69	0.0	5	10[a]	13[a]	7[a]	n.	Samuel Graham.
Fairport	De Kalb	920	16	.....	.....	.....	.....	.....	.....	.....	1.34	− 2.73	0.42	0.0	4	21	1	9	sw.	J. W. Lincoln.
Fayette‖	Howard	725	27	74.5	− 1.6	98	24	48	26	32	2.87	− 0.10	1.70	0.0	10	14	12	5	.....	Prof. T. Berry Smith.
Fulton	Callaway	818	19	74.2	− 2.3	98	23	42	27	38	4.37	+ 1.14	1.92	0.0	6	16	12	3	.....	Dr. J. L. Brenneman.
Glasgow	Howard	618	33	.....	.....	.....	.....	.....	.....	.....	1.57	− 1.53	0.98	0.0	6	13	8	10	se.	J. J. Shaughnessy.
Grant City	Worth	1,130	18	73.6	.....	100	1	45	26	36	6.22	+ 2.42	2.56	0.0	9	21	2	8	nw.	W. H. Campbell.
Harrisonville‡‖	Cass	912	38	76.2	+ 0.9	101	23	47	27	40	3.20	—0.85	1.71	0.0	6	11	2	18	sw.	A. J. Sharp.
Hazelhurst	Livingston	.....	17	.....	.....	.....	.....	.....	.....	.....	2.43	− 1.15	1.50	0.0	4	.....	.....	.....	.....	W. H. Baker.
Hermann	Gasconade	482	36	.....	.....	.....	.....	.....	.....	.....	3.85	− 0.95	1.90	0.0	8	11	13	7	e.	C. T. Maushund.
Houston	Texas	1,280	18	73.4	− 1.9	95	30	40	27	38	1.88	− 1.54	1.00	0.0	4	8	21	2	s.	E. Dempsey.
Huntsville	Randolph	790	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. H. Hammitt.
Jefferson City‡‖	Cole	628	29	74.4	− 2.4	101	23	45	27	41	1.84	− 0.78	0.74	0.0	7	21	0	10	s.	Miss Emma Swift.
Kansas City	Jackson	963	21	75.2	− 0.6	95	23	53	26	27	5.00	+ 0.25	2.22	0.0	11	11	13	7	s.	U. S. Weather Bureau.
Kidder‡‖	Caldwell	1,017	20	74.1	− 1.0	103	23	47	26	31	1.23	− 2.92	0.30	0.0	8	13	8	10	sw.	J. F. Sharp.
Lamonte	Pettis	863	22	74.7	.....	98	24	42	27	41	1.81	− 1.74	0.55	0.0	6	13	16	2	nw.	J. R. Wade.
Lebanon	Laclede	1,265	22	74.1	− 2.4	91	22†	47	27	28	4.70	+ 1.57	2.27	0.0	6	11	13	7	s.	M. W. Serl.
Lexington‡‖	Lafayette	813	28	74.4	− 1.3	98	23	45	26†	35	2.25	− 1.05	0.68	0.0	7	12	1	18	s.	J. W. Keithley.
Liberty	Clay	864	22	75.1[c]	− 1.2	98	22†	46	25	36[c]	3.74	− 0.44	2.03	0.0	9	21[b]	6[b]	2[b]	e.	W. C. Wilmott.
Lockwood	Dade	1,088	16	75.8	.....	95	22†	48	26†	31	3.65	− 0.23	1.14	0.0	6	23	5	3	so.	C. S. Crow.
Marshall	Saline	779	20	73.7	− 2.3	98	23†	45	26†	37[c]	1.78	− 1.98	0.82	0.0	4	16[b]	11[b]	2[b]	sw.	Dr. W. H. Black.
Marshfield	Webster	1,492	2	74.4	.....	95	30	47	27	35[b]	3.49	.....	1.53	0.0	4	13	10	8	se.	Dr. O. P. Keller.
Maryville‡‖	Nodaway	1,160	20	73.6	− 0.9	100	22	45	26	39	1.62	− 2.98	0.52	0.0	10	13	6	12	n.	J. R. Brink.
Mount Vernon	Lawrence	1,480	34	76.8	− 1.1	99	24	50	27	34	3.30	− 0.80	1.11	0.0	6	20	8	3	se.	O. L. White.
Nevada	Vernon	860	16	.....	.....	.....	.....	.....	.....	.....	3.66	− 0.27	1.73	0.0	8	24	6	1	sw.	C. Jewell.
Oregon	Holt	1,113	55	73.2	− 1.9	96	1†	42	26	35	1.65	− 2.65	0.73	0.0	10	17[a]	7[a]	6[a]	se.	Tom Curry.
Osceola	St. Clair	738	11	.....	.....	.....	.....	.....	.....	.....	2.82	+ 0.01	1.18	0.0	5	19	6	6	sw.	W. E. Matthews.
Pattonsburg	Daviess	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.39	.....	0.62	0.0	4	13	5	13	se.	Wm. Burton.
Rolla	Phelps	1,092	29	74.8	.....	96	23†	46	27	36	3.80	+ 0.03	1.52	0.0	7	19	4	8	s.	Prof. P. J. Wilkins.
St. Charles	St. Charles	614	32	74.8	− 1.7	96	16	49	26†	34	2.83	− 0.12	1.66	0.0	5	13	9	9	s.	L. C. Saeger.
St. Joseph	Buchanan	825	39	75.0	.....	98	22	46	26	31	2.00	− 1.85	0.57	0.0	9	12	11	8	se.	U. S. Weather Bureau.
St. Louis	St. Louis	567	39	75.3	− 1.9	93	22	54	26	22	1.90	− 0.76	0.81	0.0	7	13	11	7	se.	Do.
Sublett	Adair	1,000	30	72.9	− 1.6	94	23	42	26	31[b]	2.50	− 0.77	2.00	0.0	2	9[b]	17[b]	3[b]	sw.	Lewis Spriggs.
Trenton	Grundy	812	15	74.6	− 0.4	94	23†	47	26	28	3.14	− 0.43	1.90	0.0	9	19	4	8	s.	W. H. Estes.
Unionville‡‖	Putnam	1,072	17	72.4	− 3.4	96	16	43	26	35	1.71	− 2.50	1.45	0.0	5	10	5	16	s.	Geo. W. Davis.
Warrensburg	Johnson	883	32	76.2	− 0.6	100	23	46	26	34	2.35	− 1.17	0.85	0.0	6	16	10	5	sw.	A. F. Smithson.
Warrenton‡‖	Warren	885	20	74.8	− 1.9	97	23†	47	26	34	2.48	− 0.28	0.68	0.0	9	14	4	13	s.	Dr. John H. Frick.
Warsaw	Benton	700	6	77.8	.....	103	23†	41	27	47	2.20	.....	0.78	0.0	8	17	11	3	ne.	Dr. J. R. Smith.
Wheatland	Hickory	920	18	.....	.....	.....	.....	.....	.....	.....	2.23	− 1.15	1.40	0.0	6	16	13	2	s.	Mrs. S. A. Jackson.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
‖ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§ Instruments are read in the morning: the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
Estimated by observer.
Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 6, Missouri Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Barnum	Powder												T.																			T.
Basin	Big Horn																															
Bennett	North Platte											.09	.28	.12				.06				.02										0.55
Big Creek Station	...do																															
Burns	South Platte																															
Casper	North Platte																															
Cheyenne	South Platte	T.	T.		T.	.01			.16				T.	.21	.21	T.		.01			.01	.01						T.	T.				0.62
Chugwater	North Platte					.02			.02		T.		T.																			0.05
Clark	Clark's Fork	.02							T.		.06		.09	.02	T.						T.				.03							0.22
Cody	Big Horn																															
Crystal Lake	South Platte																															
Dome Lake	Tongue																															
Douglas	North Platte																															
Dubois	Big Horn											T.	.08	T.																		0.08
Eaton's Ranch	Tongue	T.									T.			.03											T.							0.03
Echeta	Powder								T.					.50											.10							0.60
Elk Mountain	North Platte											1.61		.13																		1.74
Encampment	...do	.01	T.		T.							T.	.02	.06								T.							.12			0.21
Ervay	...do																															
Fort Laramie	...do					.07			T.										T.			T.										0.53
Fox Creek Station	...do	.06										.10		.23	.05		.46				T.				T.	.04			.03			0.51
Gillette	Powder							.14					T.	.29											.08							0.51
Hunters' Station	...do												.26												.13							0.39
Hyattville	Big Horn																															
Jtreh	Niobrara					.01			.09				.03					1.19											.03			1.35
Kirtley	...do						.02	T.										.16														0.18
Kirwin	Big Horn								.12		T.	T.	.28	.05	.15		T.												T.			0.60
Knowles	Belle Fourche					.07	.19		.29		.08		.22		.26										.73							1.85
Lander	Big Horn									T.		T.	.33	.02	T.					T.	T.								.01			0.36
Laramie	North Platte												T.	.27							T.	T.							T.			0.27
Leo	...do		T.															T.										T.	T.	T.		T.
Lolobama Ranch	Big Horn																								.30				.05			0.25
Lovell	...do								T.				.05	.19	.12										.08							0.44
Lusk	Niobrara																															
Manville	...do								.16				.02				.02		.54										.01			0.75
Moorcroft	Belle Fourche		.25						.30																.10							0.65
Moore	North Platte		.02			.14							.01	.01		T.		.02														0.20
Newcastle	S. Fork, Cheyenne					T.			.16				.04	T.		T.									T.							0.20
Pathfinder	North Platte																											T.				T.
Phillips	...do																															
Powell	Big Horn													.22	.04										T.				.02			0.28
Rawlins	North Platte	.20																			T.	T.						T.	.02			0.22
Riverton	Big Horn																															
Saratoga	North Platte	.07										T.		.15					T.		T.							T.	T.	T.		0.22
Sheridan	Tongue	.04				T.			.04		T.		.01	.04											.20				T.			0.42
Shoshone Dam	Big Horn												T.		T.										T.							T.
Soldiers' Home	Powder	T.	.03						.19				.12	T.											.05							0.39
South Pass City	North Platte	.01											.05	.01													T.	.02	.04				0.11
Thermopolis	Big Horn																															0.00
Upton	Cheyenne																															
Valley	Big Horn										.02		.07												.03							0.12
Verona	Tongue							.05					.12												.54							0.71
Wiant's Ranch	North Platte	.05					.25						.17				.04				.15											0.66
Wiley	Big Horn																															
Wyncote	North Platte				.52										.22																	0.74
Yellowstone Park	Yellowstone	.11				T.			.19		T.	.05		.14	T.						T.				T.				.03			0.52
(1) Fountain Hotel	Madison													.18																		0.18
(2) Grand Canyon	Yellowstone	.18										.29		.12											T.				T.			0.59
(3) Lake Hotel	...do	.11										.03	.32	.13											.01				.06			0.66
(4) Norris	...do	T.						T.					.20												T.				T.			0.20
(5) Riverside	Madison	.12																														0.12
(6) Soda Butte	Yellowstone																															
(7) Sylvan Pass	Big Horn	.25												.16																		0.41
(8) Thumb	Yellowstone													.33																		0.33
(9) Tower Falls	...do	.43	.42											.15																		1.00
(10) Upper Gey. Basin	Madison										.02			.17															T.			0.19
Montana.																																
Adams	Yellowstone																															
Adel	Missouri											T.		T.										T.	2.00			1.11		T.		3.11
Agricultural College	Gallatin	.01							.14																.59			.72				1.46
Augusta	Sun																															
Babb	Milk							.10			.06					.45	.17							.07	.20				.25		.05	.17	1.52
Bald Butte	Missouri					T.		.07		T.			T.												.17			.55				0.79
Big Timber	Yellowstone								.40																.65							1.05
Big Timber Creek	...do	.02						.06	.10	.01			T.			T.									.60			.04				0.83
Billings	...do	.12	.10						.12					.20	.04										.70							1.28
Boulder Nursery	Jefferson												T.	T.											.19			1.00				1.19
Bowen	...do																															
Bridger	Yellowstone								.05					.03											.19							0.27
Broadview Exp. Sta	...do		.06						.14																.60			.11				0.91
Busby	...do	.02												.14	.05										.31			.02				0.54
Busteed	...do								.29		T.	.03	.07	.17	T.										.51			.08				1.15
Cabin Creek	Jefferson					.05							.15															.07				0.27
Canyon Ferry	Missouri							T.						T.														1.32				1.32
Cascade	...do					T.	T.							T.	T.	T.	T.								.25			.42		T.		0.67
Cataract Creek	Jefferson																															
Chessman Reservoir	Missouri							.11				T.		1.00											.28			.35				1.74
Chester	...do																															
Chinook	Milk																															
Chouteau	Missouri																															
Clear Creek	Milk					T.	T.									T.	T.								.20			.21				0.41
Clemons	Missouri					T.		T.						T.	T.										.14			1.02		.03		1.19
Clyde Park	Yellowstone								.22				.07	T.											.15			.26				0.70
Copper	Musselshell		T.					T.	.05				T.												.10			.11				0.26
Crow Agency	Big Horn													.04											.52			.05				0.61
Culbertson	Missouri																															
Cut Bank	Marias																		.20					T.	.22			.18				0.60
Decker	Tongue																															
Delpine	Musselshell	T.						.10	.01				T.	.22	T.								.09					.12				0.54
Denton	Missouri																								.06			.50				
Dillon	Jefferson	T.					.09	T.			T.	T.													.02			T.				0.11
Dirty Creek	Musselshell								.14					.45											.08			.32				0.99
Dry Creek	Missouri							.01			T.	T.		.03											.20			.75				0.99
Dry Wolf Camp	...do				T.						.08	.01		.30		T.	.04								.05			.76		T.		1.24

TABLE 2.—*Daily precipitation for August, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana—Cont'd.																																	
East Gallatin River	Gallatin	.05							.17				.14	T.		T.									.42					.84			1.62
Ekalaka	Little Missouri						.05						T.	.04	2.23			.21															2.63
Elkhorn	Jefferson							T.		T.	T.		T.	T.				T.					T.							.85			0.85
Evans	Missouri																																
Fallon	Yellowstone													.26		.33	T.								.58								1.17
Family	Marias															.02									.34					.24			0.60
Fish Creek	Jefferson										T.															.25				T.	T.	.38	0.63
Fishtail Creek	Yellowstone							.02	.07				.01	.23											.28								0.61
Flathead Creek	...do												.13												.40					.70			1.32
Forsyth	...do																								.65								0.65
Fort Benton	Missouri																																
Fort Shaw	Sun																													.25	T.		0.25
Foster	Big Horn	.05											.04	T.											.40					.04			0.52
Garneil	Musselshell												.15	.03											.10					.80			1.08
Glendive	Yellowstone											T.	2.63			.98	T.								.56								4.17
Goldbutte	Marias																								.12					.02		.01	0.16
Graham	Powder		.06			.20		.02				.16		.10			.21								.14								0.89
Grayling	Madison	.13									.08		.03																				0.24
Great Falls	Missouri					T.	T.						T.	T.			T.								.09					.16		T.	0.25
Half Moon Pass	Musselshell									T.	.40		T.	.20	T.	.10									.60					1.35			2.65
Half Way House	Missouri	.05						T.	.02		.02	T.		.02											T.					.49			0.60
Harlowton	Musselshell																								.55					.09			0.64
Havre	Milk					T.	.22								T.		.10								T.					.04			0.37
Helena	Missouri				T.			.04			T.		T.	.03										.01	.05					.91		.02	1.06
Highwood	...do						T.							T.	T.										.55					1.45			2.00
Homepark	Jefferson	.28											T.																			.07	0.35
Huntley	Yellowstone													.39											.49					.12			1.00
Jones Canyon	Gallatin	.02						.10							.02										.66					.68			1.48
Jordan	Missouri																																
Lewiston	...do													T.											.57					.22	.02		0.81
Livingston	Yellowstone	.13							.16		T.	T.	.06		.12	.02					T.				.33					.08			0.90
Lodge Pole Creek	...do																																
Lonetree	Missouri														.14										.10					.70			0.94
Lost Horse Creek	Musselshell										T.	.01		.02	.15	.03									.77					.10			1.08
Malta	Milk					.23								.29	T.	T.														.24			0.76
Meadow Creek	Madison							.02							T.										.05					.01			0.08
Melstone	Musselshell												.02			.07									.60					.35			1.04
Mildred	Yellowstone		T.				T.							.13	.12									.66					.03			0.94
Miles City	...do																																
Moore	Missouri													.10	.10										1.02					.23			1.45
Norris	Madison								.05				.10												1.70					.11			1.96
Nye	Yellowstone							.10			T.	T.	.05												.25					.06			0.46
Olsen Creek	Jefferson							.05																	.03					.81			0.89
Pipestone Pass	...do	.03						.03			T.	.02		.16											.10					.57			0.91
Poplar	Missouri					.21								.49		.35	.10								.17					.35			1.67
Raymond	...do				T.	T.			T.					T.	T.		.30												.65			T.	0.95
Red Lodge	Yellowstone	T.											T.	.02											.85								0.87
Reese Creek	Gallatin																								.52						.87		1.29
Renova	Jefferson	T.							.01						T.										.01					.02			0.04
Rimini	Missouri																																
Ryegate	Musselshell	.10						.02		.15	T.	T.	T.	.05	T.	.07									.70					T.			1.00
Sedan	Yellowstone																																
Springbrook	...do																															.90	0.90
Stearns	Missouri																								.10					.43			0.53
Three Forks	Madison																																
Tokna	Yellowstone																																
Townsend	Missouri																													.25	.25		0.50
Trail Creek	Yellowstone	.03						.37					.06		.04										.26					.74			1.50
Utica	Missouri													.20											.25					.22			0.67
Valentine	Musselshell													T.	.03	T.									.41					.48			0.92
Virginia City	Jefferson & Madison	.10						.04	.18				.04	T.	T.										.09					.17			0.62
Wall Rock Mountain	Missouri																								.12					.31			0.43
Warm Springs Creek	Madison	.38						.02	.08			.04	.06	.02	.03									.01					.30				1.04
Willow Creek	Yellowstone						.61						.45												.35					.41			1.82
Wolf Creek	Missouri																																
Wolf Point	...do																								.02					.71			0.75
Woodville	Jefferson							.01			.01																						
North Dakota.																																	
Aplin	Knife						.27	T.					.03	T.	.06	.10									.24	.40				.06			1.16
Beach	Little Missouri	.05					.02						.60		.10	T.									.42					.04			1.23
Berthold Agency	Missouri			.11		.45	T.									T.									.53					T.			1.09
Bismarck	...do	T.				.16	.01	.01				T.	T.	.01	.63	T.	T.			.02		T.			.23	.03		T.		.16			1.26
Broncho	Knife					.35									.35										.64					T.			1.34
Buford	Missouri	.50				.49	T.							.02		.32	.04								.56					.10			2.03
Coal Harbor	...do						.41									.50														.48			1.39
Dickinson	Hart	.16				.55							T.	.30	T.	T.	.03								.43	.14				T.			1.61
Edgely	James	.01					.09	.05					.15		.11	1.43	.04									.07				.01	T.		1.96
Epping	Missouri						.30									.29	.24								.55	.02				.23	.03		1.66
Fullerton	James							.28					.29		1.18		1.07									.11				.28			3.31
Haley	Grand	.09	.01				.07						.04	T.	1.02	T.	.07								.25					T.			1.55
Hettinger	Cannon Ball																																
Howard	Missouri	T.	.01			.35	.07	T.	T.		T.		T.	T.		.41	.02								.61					.12			1.59
Jamestown	James					.23	.55			T.					.35	.35														.50			1.98
Lamoine	Missouri																																
LaMoure	James							13						.14		.66		.98													.06		1.97
Mc Henry	...do		T.	.01			.04								.05	.95	.05											.07		.35			1.52
Manfred	Sheyenne		T.	T.			.09								T.	.48	T.											T.		.35			0.92
Marmarth	Little Missouri	T.				T.	T.						.12	.05	.50	T.	.08								.29					.02			1.06
Marstonmoor	James						.27	T.	T.						.40	.21	T.								T.				T.	.45			1.33
Medora	Little Missouri													.21											.28								0.49
Melville	James	.05													.17	T.	T.								T.				T.	.42			0.64
Mott	Cannon Ball	.06				.82							.47	.61		.10									.51				.05				2.58
Napoleon	Missouri	T.					.22						.35		1.56	.12				.38						.15				.30			3.08
New England	Cannon Ball	T.				.20	T.						.16	T.	.50		T.	.05					T.	T.	T.					T.			0.91
New Salem	Heart	T.	T.				.36		T.				T.	.09	1.39		.05			.40				.10	.34								2.73
Orange	Cannon Ball	.10	.08				.08						.07		.57										.33	.27							1.50
Palermo	Missouri																																
Schafer	Little Missouri	T.					.79						T.		T.	.16	T.								1.38	.08				.04			2.45
Steele	Missouri																																
Washburn	...do		T.				.45								.21	T.	.18								.22	T.				.15			1.31
Williston	...do	T.	T.			.36							T.	.11	.13	.07	.03								.84					.01			1.35
Wishek	...do	.10	T.				.20								.55	.25										.15				.06			1.31
South Dakota.																																	
Aberdeen	James		.25	T.				.50	.15					.60			.35	.12		.15						.05					.30			2.47

TABLE 2.—*Daily precipitation for August, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Dakota—Cont'd.																																	
Academy	Missouri	.15	.03				.25	.05	.22		T.			T.		.09	.03				.22									.30		1.34
Alexandria	James		.28										.46			.25																0.99
Ardmore ‖	Cheyenne															.22												.21				0.43
Armour	Missouri						.05	.25																						.10		0.40
Belle Fourche	Cheyenne					.50	.10						.15		.18										.32							1.25
Brookings	Big Sioux	.12	.40	.04										1.71		.09	.10															2.46
Camp Crook	Little Missouri	T.	.15										.10		.56		T.								.25							1.06
Canton	Big Sioux					.28								.23		.61	2.43												T.	.71		4.26
Cascade Springs	Cheyenne		.04						.08																				.18			0.30
Castlewood	Big Sioux	.15	.32				.03	T.					.10	1.14	T.			.08				T.	T.								.60	T.	2.42
Centerville	Missouri			.38			T.		T.	T.	T.			.45		.74	.42	T.			.06									.30		2.35
Chamberlain	...do	.24	.25				.18		.34		.10			.16			.25													.15		1.67
Clark	James	.31					T.		.11				T.	1.64			T.														.46		2.52
Cottonwood	Missouri							.08	.20				.10		.10									T.	T.							0.48
Crow Creek	...do	.16	.01				.17	.18	.13				.10			.13	.01			.43						.03				.05		1.40
Daviston	Grand		.05			T.	.16						.25		.85											.42						1.74
Deadwood	Cheyenne					.30	.40		.10		.15		.10		.10										.35							1.50
Deerfield	...do					T.			.38				.41												T.							0.79
De Smet	James	.20					.05				.80		1.45			.05	.33												.25			3.13
Dowling	Cheyenne							.10	.27			.12		T.	.16						.16				T.	.10			T.			0.91
Dumont	...do		.12				.39		.26				.24	.03											.13							1.18
Elk Mountain	...do			.10					.13				T.																			0.23
Elk Point	Missouri			.50							.02			.02		1.30		T.												.44		2.28
Englewood	Cheyenne						1.15	.10	.40																	.05						1.70
Eureka	Missouri	.13	.04					.37					.15				1.41									.20				.30		2.60
Faulkton	James	.45	.01					.17	.01				1.78			T.	.04				T.					.10				.28		2.84
Flandreau	Big Sioux	.50	.30											.13		.32	.74												.04		.40	2.43
Forestburg	James	T.	T.			.03		T.			.19	T.	1.63			.03	T.			T.			T.						T.	.26		2.14
Fort Meade	Cheyenne						.88		.04				.20		.14										.20							1.44
Frederick ‖	James																															
Garvalley	Missouri	.13	.50				.52	.13			.30		.43			.40				2.80									.30			5.51
Greenmont	Cheyenne					.10	.70	1.00	.70				.27		.10										.22							3.15
Greenwood	Missouri	.20		T.			.15		.24		T.		T.																.06	T.		0.78
Hardy Ranger Station	Cheyenne																															
Harvey's Ranch	...do																															
Hermosa	...do	.01	.13					.10	.35		.02		.02																			0.63
Highmore	Missouri		.04				.12	.22						.07								.02	.12			.02				.05		0.66
Hill City	Cheyenne		.15				.01		.26		.05		.08			.07																0.62
Hopewell	...do							.95	.09						.08						T.					.18						1.30
Howard	James			T.			.05	.01	T.		T.	.15		.65			.85						T.		T.		T.	T.		T.		.16		1.87
Howell	...do	.05	T.				.01	.19					.10	.20			T.				T.					.03				T.			0.58
Huron	...do	.13	T.				.20	.06			.02		.49			.21	.04	.02												.16		T.	1.43
Ipswich	...do																															
Kadoka	White	.07	T.				.04	.06	.17				.04		.24	.18																	0.80
Kennebec	Missouri	.16					.18	.25	.27							.22																	1.08
Kidder	James	.25	T.					T.	.15				1.00		.55		1.00	T.													T.		2.95
Kimball	Missouri	.30	T.				.13		.09					.15		.20				T.											.37		1.24
La Delle	James	.40	.03				.08	.36	.08		.03		.87	.70			T.	T.		T.											.40		2.95
Lead	Cheyenne					.46	.32	.44	.08		.08		.15		.09										.20				.05			1.87
Lemmon	Grand	T.	.08				.05						T.		.75										.57					T.			1.45
Marion	Missouri			.50					T.					.06			.20	T.			.41		T.									1.17
Marston	...do							.14					.13																			0.27
Mellette	James	.24	T.					.28					1.18	.53			.41	.09			T.					T.					.22	T.	2.95
Menno	...do		.17					T.	.09		.08			.10		.38	.10				T.								.08	.17			1.17
Milbank ‖	Minnesota		.56						.44					.67		.07	.38	.22			.24					.21					.59		3.38
Mitchell ‖	James		.85					.15			.47		.71		.15	.10				.20									T.	.35			2.98
Murdo	White							.40	.15							.40				.40													1.35
Oelrichs	Cheyenne																															
Orman	...do						.27		.23				.07		.05										.31	.02							0.95
Ottumwa	Missouri	.23					.17								.16						.35												0.91
Pierre	...do	T.	T.				.52		.02				T.		T.	T.					T.	T.			.06								0.60
Plankinton	James	T.	T.				.09		T.		.33		.51			.15	.10			1.32			T.						T.	1.25			3.75
Pollock	Missouri		.02					.10					.23		.08	.27										.14				.24			1.09
Rapid City	Cheyenne	T.	T.				.09	.06	.40		T.		T.		T.		T.		.04	T.	T.				T.				T.				0.59
Redfield ‖	James		.34					.64	.14					.87																			1.99
Rochford	Cheyenne	.07				.02	.14	.20	.14		T.		.20												T.								0.77
Rosebud	White		.42	.07				.09	.18	T.	.10		.09			.09		.05															1.09
Roslyn	Big Sioux	.42						.04	.24				1.00	.60	1.78		1.02	.08													.22		5.40
Savoy	Cheyenne																															
Selby	Missouri	.21	.08				.82						.60			.22		.06							.31					.23			2.53
Sioux Falls	Big Sioux			.75										.25	.15		1.25	.25	.15											.60			3.40
Spearfish	Cheyenne					.48	.52		.18				.08												.18								1.44
Stephan	Missouri	.06	T.				.10	.20	.05					T.	T.	.19				.01		.10								.05			0.76
Tama	Cheyenne	.09	T.			T.	.25		T.			T.	T.		T.		T.				T.				T.	.14			T.				0.48
Vale	...do						.16						T.		T.	.75									.26	.15							1.22
Vermilion	Missouri			.27							.04		.80		3.13															.57			4.81
Water's Ranch	Cheyenne					.73	.92		.19		.11		.08		.10										.22								2.35
Watertown	Big Sioux	T.	.87						.35				*	1.00		T.		T.												.95		T.	3.17
Wentworth	...do		1.03											.22		.72	.65												.04		.17		2.83
White Lake	Missouri						.14	.05	.05		.32		.29			.08				.82	T.													1.75
Winner	White																															
Yankton	Missouri	.01	T.	T.			T.		.14		.66		.18	.50	.09	1.72	T.	T.		T.									T.	.05	.02		3.37
Minnesota.																																
Pipestone	Big Sioux		.18	.33										.07		.05	.62	.76												.06			2.07
Colorado.																																
Akron	Republican			.06	3.38	.12			.06		.11							.11			.06							.08					3.98
Alma	South Platte							.13				.22					.19					.25											0.79
Arriba	Republican	.55	.01	T.					.09	.06		T.	T.		T.	.02		.04	T.	T.		.04			.12				.07	.01			1.01
Auldhurst	South Platte	T.	.03	.02	.16				.03	.23		.33		.30				.26		.05	.09		.15			.05							1.70
Boreas	...do	.22	.08		.12	.18						.22					.18					.12	T.										1.12
Boulder	...do																															
Burlington	Republican				.55	1.13		.04					.94		.01	1.74		.08												.07			4.56
Cassells	South Platte				.20										.10				.25			.09	.02	.25	.12				.02				1.05
Castle Rock	...do			.05				.15	.05	.04				.78	.57	.06	.05	.06	.07											.05			1.93
Cheesman	...do	T.	T.		T.	.75			T.	T.	T.	T.	T.	T.	.50			T.	.25	T.	T.		T.	T.					T.				1.60
Cheyenne Wells	Smoky Hill				.18	.94		T.	.09	T.			T.			1.32	T.	T.							.30				.27		T.	T.	3.10
Cope	Republican				1.42	1.28							.02	.75				.36																3.83
Corona	South Platte					.08	T.						T.		T.								.50											0.58
Denver	...do	.04	T.	T.	T.				.50			T.	.07	.71	.02		T.	.06			T.	.05		.04			.30		T.				1.79
Edgewater	...do	.14	.02	.35					.02	.97				.24	.20							.01	.13			.02							2.10
Estes P'k. Fish H'y	...do				.14	.12								.78	.08			.03	.06	T.	T.	.14							.05				1.40
Fort Collins	...do	.01	T.		.09	.08			.13	.03			.12	1.01	.27	.13		.01		.01	T.	.03							T.				1.92
Fort Morgan	...do	T.			.40	1.10							T.		T.			T.	T.										.08	.50			2.08
Frances	...do																															

TABLE 2.—*Daily precipitation for August, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado—Cont'd.																																	
Fry's Ranch	South Platte										.09		.05	.45	.20			T.		.05	.08												0.92
Georgetown	do	.03	.01		.03	.10			.02		T.	T.	T.	.03	T.		T.	.03										.02				0.27
Greeley	do		.02		.25	.33		T.	.16				.20	.19																		1.15
Grover	do	.03		.05			.10		.04				.01			T.		.01	.01		.01	T.							.06	.01		0.33
Hartsel	do		.03		.40	.21		.01	.02			.04		.13				.08						.08				.23	.24			1.47
Hawthorne	do	.07	T.		.24	T.			.10	.28	.21			.35	.23			1.04			.10	.04		.03								2.69
Holyoke (near)	do	.05		.02		.55		.04					1.85		.40	.02		.11														3.04
Idaho Springs	do				.16	.17					.05			.07	.06			.07														0.58
Keota	do																															
Kessler	do																															
La Porte	do				.22									44	.69		.12															1.47
Le Roy (near)	do			T.		1.34			T.		.16	.15	T.		.07			.10		.03								.10				1.95
Longmont	do																															
Long's Peak (near)	do	.50				.50			10					10	.25							.30										1.75
Moraine	do				.10				10					10																		0.30
Platte Canon	do	T.	T.						.50					.38	.13		.01	1.00														2.02
St. Cloud	do																															
Sedgwick	do					1.60	.50		.18		.25				.13		.10	.50		.30	.10											3.76
Sill Mine	do	.08		.02		.35			.02					.55							.10	T.	T.	.05	.10				.05			1.32
Silver Lake	do																															
Spicer (near)	North Platte	.04				.02									.20							.10						T.	.02			0.38
Sterling	South Platte			.07		1.25							.09			.61				.02	.01											2.05
Waterdale	do		.09		.19	.06			.05		T.		.11	.17	.10			.01			.04	.05							.29			1.16
Westlake	do																															
Wray	Republican	T.				2.09	.52						.71		.05			.14														3.51
Yuma	do																															
Nebraska.																																
Ainsworth	Niobrara	.51	.18			.24	.44		.08		.58		T.	T.			.14													.15			2.32
Albion	Loup	*	*	1.80			.03		.30			.54		.92			.41	.34				.22							.50	.52	.11		5.69
Alliance	North Platte								T.						1.00			.20														1.20
Alma	Republican		.15					.13	1.18			1.79		.35				1.05													.01	4.66
Anoka	Niobrara	.10	.12				.07	.18	.37					.10									T.							.15		1.09
Ashland	Platte			.31					.04					.59	.01	T.		1.32	.01			.11			T.	.14			.42	2.49	.11	T.	5.55
Atkinson	Elkhorn		.07	T.				17	1.02		T.		.69	T.	.20		.46	T.	T.			.75	T.					T.		.06		3.42
Auburn	Little Nemaha		.05	.06					.20	.09					2.62	.11		2.32	.35			.15							.27	.22		6.82
Beatrice	Blue		.07						.72	.06				.05	1.19			3.01				.36			.08				.93	.05	.05	6.57
Beaver City	Republican		1.41			.11	.05					.16		.50				.41												.17			2.81
Bellevue	Missouri			.45					.01					.26	.03			.72				.10			.04	T.			.05	4.20	.46	T.	6.52
Blair	do			.40					.01			T.		.69	.05	.54		1.28	.04		T.	.10				.23		1.92	2.72	.33			8.31
Bloomfield	do	.15	1.20				.10	T.	.70		.25		.34	.02	.97		.05						.01										2.79
Bridgeport	North Platte			T.					T.				T.					.20											T.			0.20
Brokenbow	Loup			1.90			.13	.04	.08	.33		1.45		2.89				2.88	.10		.09												9.89
Burge	Niobrara	.65	.24			.61			.47		.32							.55		T.													2.84
Callaway	Loup	.09	.05			.65			.07		1.50						.77	.97						.15									4.82
Cambridge	Republican	.10				.05	T.		T.			.93	.17	.54			T.	.30										T.		.32	T.		2.41
Canton (near)	North Platte					.10		.05							.12	T.		.29	T.														0.56
Columbus	Loup		.20	.30				T.	.07	.12		24	1.15	.90	.05		1.10	.16			.53				.16				1.65	.20		6.83
Creighton	Missouri																															
Crete	Blue		.05						1.30					.09				2.31	.02			.20			.05				1.50	.10	.10	5.82
Culbertson	Republican						.68					12	.90	1.12		.05		.17	.42													3.46
Curtis	do	.28	.66	T.		*	.55	T.	.09	T.		24	T.	1.67			.05	2.05														5.59
David City	Blue		T.	.38			T.		.21			.04	T.	.50	.20			1.55	.01			.65				.20			.38	2.60	.12		6.84
Dawson	Great Nemaha																															
Elsie	Republican		T.				.56			T.			.91			.01	.01	.07			.01	.01	.06		T.			T.				T.	1.64
Enderslake	Loup																															
Ewing	Elkhorn	.06		.31			.05		.35		1.25		.18					.37	.08			.28				.04			.03		.05		3.15
Fairbury	Blue	1.21					T.	.61	.10				.22	.29	.07		1.00	.09	T.		.03			.18					.45		.05	.16	4.46
Fairmont	do		.03						T.	.50		.40			.77	.03		3.55	.02			.10								.45	T.		5.85
Fort Robinson	Niobrara							.52	.05				T.				.05	.22										T.	.02			0.86
Franklin	Republican																															
Fremont	Platte			.73					.05			T.		1.12	1.02	.15		1.90				.08				.20		2.10	2.50	.29		10.14
Fullerton	Loup	.10		.30					.25			.52		1.98	.25		1.42	1.10								.30		.27	4.80			11.29
Geneva	Blue		.10			T.		T.	.49	.25		.33		.28	1.51			2.73			T.	T.				T.		T.	.52	.06	.04	6.31
Genoa	Loup	.30	T.						.20		.40			2.00				.80	.75			T.				.11			.25	1.85	.01		6.67
Gordon	Niobrara	.24									.63								.53													1.40
Gosper	Republican	.50				.52			.75		.08		.16	.52				4.00															6.53
Gothenberg	Platte	.58		.10	T.	.50	T.		.50		.60	.10	.15	.90	T.			.12	.52														4.07
Grand Island	do		.60				.10			.15		.25	.05	.85	.22	.10		1.30	.05						T.				.06	.05		3.78
Grant	Republican	.08				.66					T.		.08		T.			.85	T.					T.				T.					1.67
Greeley	Loup	.05				.22	.03	.21	.05		.56		2.11	.81			2.21	.65							.05			.06	2.95	.06			10.02
Halsey	do	.16	.30			.55	.25		.09				.61	.38				.31	1.17						T.			.08		.10			4.00
Hartington	Missouri			.12				.10	.22	T.		.78		.62	.32	2.20	.42	.14												.28			5.20
Harvard	Blue	.07		.01		.04			.78		.42	.04	.04	1.51			1.77			T.						.03			.45		.11		5.27
Hastings	do		1.54				.10		.23	.67		.61	.14	.08				2.90									T.			T.	.13		6.40
Hayes Center	Republican					.51					.25	.02	1.44		.25			.48												T.			2.95
Hay Springs	Niobrara					T.		T.	T.		T.		T.		T.	T.		.60															0.60
Hebron	Blue		1.74				T.		.61	.02		.24		.51	.02			1.75				.02			.04				.11		.10	5.16
Hemingford	Niobrara							.08	.08	.01						.27		.18															0.62
Hillside	North Platte	.07			T.	.60	.06	.04	.95					.04		.06	.11	1.00								.03							2.96
Holdredge	Republican		.60		.06	.03	.14		.44	.01		1.14		.35	.05	T.		2.80	.03												.08		5.73
Hooper	Elkhorn		.65						.16					2.70	1.09	.10	.74	1.14				.16				.20		2.05	.80	.18		9.97
Imperial	Republican	T.			.05	1.05	.03		T.	T.	.55		.57		.25		T.	.32			T.		T.					T.	T.	T.			2.82
Kearney	Platte		.06	.32		.05			.06			.56		.20	.03			2.05												.11			3.44
Kimball	South Platte	.18	T.					.05				.15			.14								T.					T.	T.				0.52
Kirkwood	Niobrara	.18	.26	.05			.25	.93	1.15	.73			.38		.25	.34			.59										.02	.17			5.30
Kowanda	North Platte	.07				.58							.04					.14															0.83
Lexington	Platte		.55	.05	.06	.15		.13				.80		.80				1.08												.10			3.72
Lincoln	do		.87						.16					.02	.04		1.63	1.95	T.		T.	1.02			T.	T.		2.93	5.45	.14	T.	14.21
Lodgepole	South Platte								T.				T.		T.		.14	.21		.04	.22									T.		1.41
Loup	Loup		.06	.15					.10			.75		.85			1.07	1.53								.12			.17	.12	.15		5.07
Loyal	do	T.				.91			.24		.54		.91					.55													T.		3.15
Mc Cook	Republican	.12				.38	.05					.39	1.20					.60													.19		2.93
Madison	Elkhorn		T.	.25				.35	T.			.40	T.	1.23		.93		.89				.60				T.			.50		.13		5.28
Marquette	Platte		.02	.02					.38			.39		.58	1.06	.01	1.06	.89								.23			.06	2.03	.12		6.86
Mason City	Loup	.12	.58					.10					2.45				2.45											.15					5.86
Minden	Blue	1.15		T.	T.	.13	.02		.14		.40	.12	.15	.29	.02			.90	.92														4.24
Mitchell	North Platte														.42			.27											.09				0.78
Nebraska City	Missouri			1.10					.15				1.82	.16				1.20				.26			.30				1.70	.84	.20	7.73
Norfolk	Elkhorn		.04	.12			T.		.18			.43		.55	T.	1.16	.42	.23				.45							.56		.54		4.58
North Loup	Loup		.28	.23			T.		.10	T.		.75	.80	1.27	T.			.62	1.93			T.				T.			.25	1.10	T.		7.33
North Platte	Platte	T.	T.		.28	.41	.04	.19	T.				.57	.01				.25	.16						.06					.05		T.	2.02
Oakdale	Elkhorn		.55	T.		T.	.02		.24		.85		1.10	.16	.02	T.	.65					.14				.02			.05	.36			4.17
Omaha	Missouri		.31	.07					.03					1.00	.01	T.	.17	.35				.07				.05			1.81	.59	.30	T.	4.76
Ord	Loup		.02			.05	.08		.06	1.00		.88	.82	.94			.88	.43															5.16

TABLE 2.—*Daily precipitation for August, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nebraska—Cont'd.																																	
Palisade	Republican					.55					.40		.38		.20	.95																	2.48
Pawnee City	Great Nemaha		.07				T.		1.52	.03				.42	.25			3.45				.05			.40					.27		.06	6.52
Paxton	South Platte	.04			.02	1.01	.09	.09	.72				.09			.03	.44	.40											.03				2.96
Plymouth ‖	Blue	.07							.92	.05			.28	.35	.50			1.80				.03			.33					.50	.02	.10	4.95
Purdum	Loup	.19	.19			.28	.17	.04	.07		.65		.29				.61	.73			.03					T.					.08		3.23
Ravenna	...do		.33	.06		.03			.20		.90	.10	.25		.08		1.70									.03				.02	.03		3.73
Redcloud	Republican		.09	.01					.49	.02		.49	T.	.09	T.		T.								.19	.03			T.	1.15		.13	2.09
Saint Libory	Loup	1.30									.54			.15	.42		.95	.90												.79			5.05
Saint Paul	...do		.09			.08			.03		.35		.64				1.53	1.62								.15			.07				4.56
Santee	Missouri			.30					.25							1.95															.15		2.65
Sargent ‖	Loup		.35	.67		.35		.10	.05	.20	1.15	T.	1.20	T.				2.30								.10							6.47
Schuyler	Platte		.33						.16			.07		1.31	.78	.03		1.88				.75				.14			1.13	2.28	.13		8.99
Scottsbluff	North Platte	T.	T.					T.	.12		T.		T.		T.			T.	T.									T.	T.	.12			0.24
Seward ‖	Blue		.55					.25	.10		T.			1.00			1.95	.12			.08				T.				5.32	1.48			10.85
Sheridan	Loup	.03	.16		.03	.08			.87			1.12	T.	T.	T.	.48	.18											.05	.02	.15			3.17
Sidney	South Platte	.08				.75			.21		.16				.75		.03	.10											.03				2.11
Springview	Niobrara	.40	.70	T.			.30		.55		1.25			.06	T.	1.50	T.	.52				1.37	T.						T.		.20		6.85
Stanton	Elkhorn		T.						.20			.36		1.25		.13	1.00	.48				.23							.72	.31	.37		5.05
Stratton ‖	Republican	.75				.25	1.04						1.10	.50		.10	1.05														T.		4.79
Superior ‖	...do		.57						1.00			.70		.87		1.40			.15									2.25				6.94
Tecumseh	Great Nemaha		T.	T.					1.75									3.20	.15											.60	.20		5.90
Tekamah	Missouri			.58					.03				4.60	.41	.03	.08	.72					.05				.33			.60	.77	.10		8.30
Tobias	Blue		.29						.94	.05		.14	T.		1.03			2.81				.19			.08					1.00	.15	.09	6.77
Turlington	Little Nemaha			.21					.19					.92	T.	T.		1.55	T.			.13			.05					3.55			6.60
Valentine	Niobrara	.25	.11	.18		.32	.38	1.77	.14		.52		.18		.70			.40		T.													4.95
Wahoo	Platte		.47					.70					.91	.11				2.05			.24				.12				4.65		.30		9.55
Wakefield	Elkhorn		.10						.12		.35		.35			.49	1.30					.04							.35		.36		3.46
Walthill ‖	Missouri																																
Watertown	Platte	.32	.80					.13			.82		.10				.95													T.			3.12
Wauneta	Republican					.45					.55		.92		.50			.22															2.64
Weepingwater	Missouri			.27					.04					.07	.14	T.		2.20	.03			.13			T.					6.79	.28	.05	10.00
Wellfleet (near)	Republican				.10	T.		.45		T.	T.	T.	1.45				.35	.25															2.60
Westpoint	Elkhorn																																
Wisner	...do			.15					.17			.25		1.73	T.	.05	.75	.68				.07							.98	T.	.38		5.21
York	Blue		.03	.03					.33	T.		.41		.54	.17	T.		2.26				.04			T.	.06			T.	4.85	T.		8.72
Iowa.																																	
Afton	Grand		.02	.50										.49		.38		.11											.88	.07			2.45
Allerton	Chariton		T.	.12			.03	.03	.03							T.		.50								T.			.02	.08	.01		0.82
Alton	Floyd			.78										.87		.67	1.28	.18					.01			.02				.62			4.43
Atlantic	Nishnabotna			.56					T.					4.98	.25	.43		.22	.01		T.	.01	T.			.15			*	4.03	.57	.01	11.22
Audubon	...do			.68										1.75	1.50	1.18		.25								.14			.86	.94	.55		7.85
Bedford	Missouri		.09	.85														.33	T.			.05			.01					.33	T.	.10	1.76
Centerville	Chariton							.09								T.	.67	.93								T.							1.69
Chariton	...do			.12				T.	T.					T.		.25																	0.37
Clarinda ‖	Nodaway		.02	.42					.21	.03							.16	.21	.14						.02	T.				.69	.13		2.03
Corning	...do	T.	.17	.52					T.					1.35		1.22	T.	.25				T.			T.					1.20	.16		4.87
Corydon	Chariton			.10			T.		.02									.13	T.											T.	.20	T.	0.45
Council Bluffs	Missouri																																
Creston ‖	...do			.99					T.					.80	.81		.78		.08										1.55	.13	.01		5.15
Cumberland	Nodaway		T.	.62										3.13		.62		.01							.01				2.55	.11	.05		7.10
Denison	Missouri		.02	.92										1.76	1.97	2.33		.70								.21			.71	.17	.96			9.75
Elliott	Nishnabotna		.08	.75										5.70	.06	.36		.31				.02			.18	T.				.70	.48	.06		8.70
Greenfield	Nodaway		.07	.48										2.10	.04	.35		.19											T.	2.50	.17	T.		5.90
Harlan	Nishnabotna		T.	.66					T.					4.42		1.64	T.	.22	T.		T.	T.				.18			.70	.90	.86			9.58
Hopeville	Grand		.04	.29					T.					T.		.23		.59												.39		.03		1.57
Inwood	Big Sioux			.55										.21		.82	2.15	.06					T.						.02		.65			4.46
Lamoni	Grand		.23				.25	.02	.10							.27		.37	.03												.16	T.		1.43
Larrabee	Little Sioux		.47											.12	T.	.97	.69	.24					T.			.04				.47			3.00
Le Mars	Floyd			.26					T.					.57	T.	1.36	.60	.36								.08			T.		.40			3.63
Lenox	Missouri		.05	.72										.05		.87		.15							.10					.98		T.		2.92
Leon	Grand	.50							.03							.15		.70												T.	T.	T.		1.38
Little Sioux	Little Sioux			.60					.04					3.60	.90	.15		.49				.06				.21			.23	.61	.10			6.99
Logan	Missouri													2.65	.58	.16		.48								.15			.66	.92	.40			6.00
Massena	Nodaway																																
Mount Ayr	Grand		1.20	.25					.05							.20		.30				T.				.05				.36	.05	.06		2.52
Odebolt	Missouri		.30	.68										1.28	.05	.95		.67	.03										.55		.16			4.67
Onawa	...do			.90					T.					2.95	.48	.85		.60				.04				.20			.65	.05	.07			6.79
Pacific Junction	...do			.28					.02					.14	.28	.20		.58				.10				.03			42	7.56	.47	.10		10.18
Rock Rapids	Big Sioux															.25	.68	T.												.55				1.48
Sheldon	Floyd		T.	.62											.30	2.00	1.00	T.			T.								.20		.75			4.87
Sibley ‖	Big Sioux			.45										.01	.14	.28	.25		.05											.07	.82			2.07
Sioux Center	Floyd			.50										.20	.18	.57	1.22			T.									.16					2.83
Sioux City	Missouri		.50						.03		T.		.16	T.	.01	1.24	.33	.08					T.						.19	T.	.22			2.76
Thurman	...do		T.	.35					.07					.53		.04		1.80	T.			.22			.24	.06				3.35	.67	.04		7.37
Washta	Little Sioux		.35											.40	.02	2.45	.42	.10											.22		.40			4.36
Woodburn	Chariton			.19				T.	T.					T.	T.	T.		.85			T.					.03				.22	.03	T.		1.32
Kansas.																																	
Abilene ‖	Smoky Hill	.18		.08		T.	.32	.34						2.12	.10		2.20	T.						T.	.14			.06	T.				5.54
Agricultural College	Kansas		.82	T.		.10		.90	2.30					.70	.25			4.25				.02			.05	.51			T.	.05	.75			10.70
Alton	Solomon		.24	.12		.10				.38		.37					T.	.21							T.		T.	T.	.10	T.	.62			2.14
Atchison	Missouri		.16			.10		1.70			T.				.10			.70				T.			T.	.10	T.			T.	.35			3.21
Baker ‖	...do		.13					.14	.38	1.25					T.			.70	.40		T.		T.	.12					.13	T.	.04			3.29
Beloit ‖	Solomon																																
Blakeman	Republican					.71						2.95				.11		.11													.10	.02		4.00
Blue Rapids ‖	Blue																																
Centralia	...do		.20				.18	T.	3.27	.13				.04	.53			1.14							.71				.41	.05	.33			6.99
Chapman	Smoky Hill	.08	.26	T.			.32		1.75	1.05				1.12	.12	.30		2.20							T.	T.			.32	T.	.50			8.02
Clay Center	Republican		.85				.33		.50	2.95				1.25				.95							.45				.45	.35	.40			8.48
Colby	...do			T.		.58	T.					.07				.08		.37										T.	T.		.15			1.25
Concordia	...do	T.	.25	T.			.09		3.52	.01	.02	.06		1.34	T.			1.47										.08	.01	T.	.61			7.57
Densmore	Solomon			.60		T.	.03		.29	.31			.15					.07							.02				T.	T.	.70			2.17
Dresden ‖	Republican			.38	.25	T.	.26	.01		T.		T.		1.34		1.23			.07											.06				3.60
Ellsworth	Smoky Hill			.06			1.80		.08		.10		.10		.06			.72	.70							.58						.48		4.68
Enterprise	...do	.61	.35	T.			.29		1.20	.30				1.51		T.		2.57							T.					.33	.10	.70			7.96
Eskridge	Kansas		1.10				.12		1.20	.50					.10			1.82	.03						.23	.09				.41	.02	.60			6.22
Farnsworth	Smoky Hill	.47				.06	.01			.23				.50		.40		.14								.12				.02	.03	.36			2.34
Ft. Scott ‖	Marmaton		.03	.10			.07	.81	T.	.66					.24	T.			1.08	.47							T.							3.46
Frankfort	Blue		.50				.20		3.45	.05				T.	.10			2.15				.15			.20					.45	.05	.40			7.70
Garnett	Marias de Cygnes		.26				.25		.06	.73				.11	.32			.77	T.						T.	T.						1.65		4.15
Goodland	Smoky Hill				.14	.93	.05	T.	T.				2.12			.72	T.	.80																	4.76
Grove	Blue							.02	.33				.20			.28		T.														.32			1.15
Hanover	...do		1.15				.03		2.33					.07	.29			1.40				.05			.16					.29	T.	.26			6.03
Harrison	Republican		.28				T.		.29	.04		.54		.44	.09		T.	2.65	.01					T.	T.					2.67	.05	.17			7.23
Hays ‖	Smoky Hill		.42	T.	.05		.34	.19		.17		.87		.09	T.	T.		.19	.63						T.	.67					.06	.24			3.92

TABLE 2.—*Daily precipitation for August, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kansas—Cont'd.																																	
Hill City	Solomon																																
Horton	Kansas		.42				.10		2.13	.20				T.				1.15				T.			.12					.13	T.	.40	4.65
Hoxie	Solomon						.34					.34			.09		.33													.10	.65	1.85
Jewel	Republican		.14		T.		.06		4.07					.39				.11						.22							.37	5.36
Lawrence	Kansas		2.44					.15	.90	.48					.45			1.79				T.			.16						.05	.72	7.14
Lebanon	Solomon		.98	T.				.28				.48						.48												1.08		30	3.60
Lindsborg	Smoky Hill		.08				.71	.49		.15				.55				.46							.15						.05	.37	3.01
Mankato	Republican		.39						.88	.36		.53					1.25	.22						.12					.23		.03	.30	4.31
Minneapolis	Solomon		.23	T.			.45			.96		.03		.51		T.	T.	.54	.05					T.	T.					.47	T.	.75	3.99
Moran	Marmaton		.25	T.			.55			1.12					T.			1.09	1.05							T.							4.06
Natoma	Saline						.40			.80								.25									.40					.50	2.35
Norton	Republican			.08			.08					.44	.20	T.										T.						T.		.28	1.08
Oberlin	...do			.45		.03	.24					.04	2.85	.20		.03		.27														.02	4.13
Oketo	Blue		.12				T.	T.	1.58	.05				.04	.41			1.06	T.			.07			.35					.24	.30	.30	4.52
Olathe	Kansas		.72				.43		1.15	.80					.01			.64							.33	.01					T.	1.00	5.09
Osage City	Marias de Cygnes																																
Ottawa	...do						.49		.90	1.23				.27	.12			1.98							.03						.28	1.41	6.71
Phillipsburg	Solomon																							T.					.07	.45		.40	
Pleasanton	Marias de Cygnes		.34				.50		.06	.95					.04			.35	.09														2.33
Russell	Smoky Hill	T.		T.			.48		.35	.58		.42		T.			1.45	.30								27						.63	4.48
Russell Springs	...do				.54	.05							.60		1.75			T.													.30		3.24
Saint Francis	Republican				.09	.68	T.	T.	T.				2.80			.18		.35															4.10
Salina	Smoky Hill	.25		.94			.61		.15	.07				T.		.36	T.	1.60	T.					T.	T.					T.	T.	.75	4.73
Scott	White Woman		.23	T.		T.	.16			1.13				1.80				2.86								T.				T.	.31	6.49
Smith Center	Solomon																																
Topeka	Kansas		1.94				.25		1.95	.22					.12			2.17						.58	.26	.01				.09	.02	.39	8.00
Valley Falls	...do								1.73	.35				10	T.			.90				T.			.20					.15	.15	.23	3.81
Vinland	...do		1.80	T.			.42		.74	1.17				.08				1.02				T.			.30	.10					.08	.96	6.67
Wakeeney	Smoky Hill	.18	.25				.17			.03			.25	.02	.13															.51	.14	.62	2.30
Wallace	...do				.90			T.					1.32			.01		.06													.19	.04	2.52
Wamego	Kansas		1.85				.10		1.70	.95				T.	T.			2.80				.05		T.	.20					.30	T.	.55	8.50
Missouri.																																	
Amoret	Osage		.35				.40		T.	.88				T.	T.			.40	T.														2.03
Appleton City	...do		.33				.73	.10	.08	.61					.04	.09	.02	.12														.02	2.14
Arlington	Gasconade																																
Arthur	Osage		.15				.58	.20	.04	.87				.03				.35	T.												T.	.12	2.34
Avalon	Grand						.54		.30							1.65		.03															2.52
Bagnell	Osage																																
Bethany	Grand		2.01	.24				.10	.26							1.49														T.		T.	4.10
Bolivar	Osage		.31				.52	.16		1.91					4.21	.44		.04	2.14							.08				.26			10.07
Boonville	Missouri			.56				1.04		.40							.74							.04	T.							2.78
Brunswick	Grand			.12				.91	T.	.31						.55									.06	.28	T.						2.23
Clinton	Osage		.13				.48	.74	.53							.01																	1.89
Columbia	Missouri		T.	2.31			1.56	.08	.12	.03						T.		.23	.04				.03			T.					T.		4.40
Conception	...do	.21	.06				.07		.41					.04	T.	T.		.35				T.								T.	.08	.06	1.28
El Dorado Springs	Osage		.10				1.16		.06	.77								T.	T.													1.69	3.78
Fairport	Grand		.30						.40						.42			.22												T.	T.	T.	1.34
Fayette	Missouri		.06	1.70			.40	.12	.13	.05						.06			.05				.10		T.						.20	T.	2.87
Fulton	...do			1.92			.16	1.49	.04										.31													.45	4.37
Glasgow	...do			.02				.98			.42								.12					.02								.01	1.57
Grant City	Grand		2.56	.73			T.		.09					T.	T.	1.80		.34	.45				T.							.02	.11	.12	6.22
Harrisonville	Osage		T.	.37				.38	T.	1.71									.47						.05	T.						.22	3.20
Hazelhurst	Grand		T.				.35	T.	.37							1.50		.21					T.						T.	T.	T.	2.43
Hermann	Missouri			1.90	.06			.60	.01	.06							T.		.08	.22				T.			T.					.92	3.85
Houston	Gasconade		T.	.08			.15	T.		1.00					T.				.65	T.													1.88
Huntsville	Chariton																																
Jefferson City	Missouri							.73	.01	.18									.06	.53						.04						.29	1.84
Kansas City	...do		2.22				.18		1.06	.05					.02			.48						.01	.70	.01					.01	.26	5.00
Kidder	Grand		.01	.25				.28	.12	.30									.23							.03						.01	1.23
Lamonte	Missouri		.25				.55	.16	.47	.30						T.		T.														.08	1.81
Lebanon	Osage						.22	1.08		.97					.06				2.27													.10	4.70
Lexington	Missouri			.35				.64		.68							.11		.26						.18	.09					T.	2.25
Liberty	...do		2.03				.01	T.	.44	.37								.33						.25	.06					.11	.14	3.74
Lockwood	Osage						1.14	.08	T.	1.08					.61	.27		T.	.47							T.						T.	3.65
Marshall	Missouri		.20				.82		.62							T.	T.		T.				T.		T.	T.						.14	1.78
Marshfield	Osage		.05				.50			1.41									1.53														3.49
Maryville	Missouri		.04	.22				.22	.13						.22			.52	.15			.05									.05	.02	1.62
Mount Vernon	Osage		T.				.81	.06	.04	1.11					.87				.41														3.30
Nevada	...do		.13				1.73	.15	.63					T.	.14			.20	.65													.03	3.66
Oregon	Missouri		.13	.01			.15		.73		T.		.05	.05				.33				.05								.12	.03	T.	1.65
Osceola	Osage			.15				1.18		.72					.50																	.27	2.82
Pattonsburg	Grand			.27					.23	.27									.62														1.39
Rolla	Gasconade		T.	.50			.15	.95		.51									1.52			.03										.14	3.80
St. Charles	Missouri			.28			T.	.77		.04						T.			.08												T.	1.66	2.83
St. Joseph	...do		.57				.21		.37			T.		T.	.08	T.		.37	T.			.02			T.					.02	.10	.26	2.90
St. Louis	Mississippi			.36			.11	.70		.01						T.		.33	.27			.12				T.						T.	1.90
Sublett	Charitan						T.									T.		.50										2.00					2.50
Trenton	Grand		T.				.16	.14	.14							1.90		.04				.01								.07	.02	.66	3.14
Unionville	Charitan							.10		T.							.08		1.45							T.					.05	.03	1.71
Warrensburg	Missouri		.58				.16	.12	.85									.42														.22	2.35
Warrenton	...do			.20	.53			.68	.01	.03									.61	.26		.04										.12	2.48
Warsaw	Osage		.16				.78	.56	.13	.32					.04	.15		T.							T.	T.						.06	2.20
Wheatland	...do		.15	.10			1.40			.43					.10																	.05	2.23

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewiston.		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	81	59	90	59	90	62	90	70	90	65	92	59	77	50	96	58	85	44	90	59	87	60	86	49	97	52
2	.....	.....	86	56	93	55	88	57	91	65	89	57	78	46	75	44	84	53	80	36	78	55	79	53	79	46	90	59
3	.....	.....	86	53	89	54	84	47	90	54	88	48	80	41	77	38	83	43	83	40	82	51	81	50	79	41	87	55
4	.....	.....	78	53	88	55	84	49	83	50	87	55	89	44	83	42	91	45	86	45	90	51	87	50	88	41	83	51
5	.....	.....	78	54	82	60	88	49	85	62	88	53	85	58	73	47	86	52	84	46	80	56	79	60	80	41	91	59
6	.....	.....	83	50	83	56	86	44	85	60	88	50	79	48	72	41	82	48	84	39	73	54	74	48	71	40	73	51
7	.....	.....	81	53	81	59	84	46	80	56	92	57	79	47	72	41	81	45	82	38	76	56	76	50	84	45	78	52
8	.....	.....	71	53	80	58	73	49	68	48	88	50	70	46	70	42	84	52	80	44	77	46	79	49	79	43	77	48
9	.....	.....	73	48	83	46	84	43	65	41	85	50	82	38	79	43	88	40	82	39	89	49	86	48	86	42	74	44
10	.....	.....	81	55	94	60	84	50	78	54	90	56	89	50	75	47	95	54	84	37	91	55	87	54	88	44	81	55
11	.....	.....	87	52	97	40	88	47	98	60	92	56	93	48	81	48	97	46	83	38	86	58	86	54	86	46	92	58
12	.....	.....	76	53	85	63	81	55	86	60	91	49	81	64	74	46	88	54	87	41	80	58	79	58	80	46	91	56
13	.....	.....	76	50	85	47	78	51	80	50	82	55	84	58	74	40	84	52	86	40	76	59	71	54	79	51	87	59
14	.....	.....	78	51	88	55	82	46	83	58	86	58	87	49	75	44	86	50	81	40	74	49	77	48	82	41	68	52
15	.....	.....	84	51	93	53	83	47	90	54	85	51	75	44	68	42	78	47	78	37	65	45	66	50	67	42	84	49
16	.....	.....	74	49	79	53	79	45	75	55	86	47	68	38	65	37	65	49	80	35	68	39	67	43	64	41	70	40
17	.....	.....	57	47	66	51	79	47	82	60	85	47	78	41	72	34	78	39	86	34	77	38	74	41	72	31	68	37
18	.....	.....	82	54	85	51	86	44	89	64	93	46	87	45	82	39	89	44	88	32	87	47	85	48	86	47	75	37
19	.....	.....	89	55	90	57	91	50	95	65	96	53	94	47	84	44	98	48	90	42	92	47	92	53	93	43	86	48
20	.....	.....	87	57	99	51	91	55	98	72	90	61	94	56	81	55	99	48	90	41	93	62	89	57	88	55	92	62
21	.....	.....	87	64	100	63	90	53	95	62	92	57	96	56	82	52	98	51	82	36	80	62	83	61	82	48	94	67
22	.....	.....	89	61	100	57	88	47	94	60	88	53	89	44	79	46	90	44	86	39	79	52	78	58	75	54	77	50
23	.....	.....	86	55	99	42	88	42	95	56	93	56	74	44	76	44	68	44	81	37	64	44	66	37	69	41	59	45
24	.....	.....	76	30	69	46	64	30	70	35	89	36	49	32	45	26	52	36	80	36	55	35	51	33	53	32	52	42
25	.....	.....	60	25	71	29	69	23	70	26	76	27	71	26	70	23	72	28	72	25	72	27	71	29	70	27	56	26
26	.....	.....	82	38	88	29	89	30	88	40	89	34	89	30	79	39	85	33	79	36	82	39	83	40	85	35	70	35
27	.....	.....	83	53	99	42	87	55	90	50	88	63	79	44	75	41	74	42	82	40	74	45	75	47	76	37	79	43
28	.....	.....	84	53	92	52	85	44	94	56	85	58	82	36	74	34	79	39	81	41	75	38	71	43	78	37	73	40
29	.....	.....	87	46	74	55	72	39	88	55	72	58	74	45	58	33	62	44	71	37	58	49	60	39	55	40	70	50
30	.....	.....	63	37	76	36	73	30	85	35	78	34	74	32	68	30	79	33	76	32	71	36	66	34	69	32	56	37
31	.....	.....	82	37	92	43	82	35	85	50	83	44	80	31	71	35	81	33	79	36	72	52	68	46	71	41	69	37
Mns	.....	.....	79.6	50.1	87.7	50.9	83.0	45.5	85.3	54.3	87.2	51.1	81.3	44.7	73.7	40.9	83.0	45.0	82.2	38.2	77.6	48.8	76.5	48.2	77.4	41.9	77.7	48.3

Date.	Montana.				North Dakota.										South Dakota.													
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.		Williston.		Aberdeen.		Chamberlain.		Huron.		Kadoka.		Lemmon.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	96	70	98	64	90	59	78	57	87	59	83	52	93	63	80	56	97	64	95	59	98	61	78	62	98	64	83	60
2	81	70	90	59	.....	53	87	57	81	59	76	52	79	56	85	56	94	62	93	60	94	57	83	54	92	60	84	63
3	82	51	82	50	80	48	78	54	79	49	75	52	77	51	83	53	88	56	83	55	86	57	79	47	83	59	78	55
4	91	53	89	47	.....	44	82	49	83	45	72	42	84	47	80	49	82	52	80	48	85	52	84	45	85	52	82	54
5	90	70	85	60	90	50	90	56	90	45	89	44	87	50	87	50	83	54	83	50	89	61	.....	.....	87	63	84	61
6	82	60	77	50	.....	53	83	61	77	53	78	57	76	54	82	52	84	50	69	61	85	58	.....	.....	82	61	81	55
7	80	52	79	50	79	52	80	56	77	50	78	55	76	52	82	58	84	58	84	56	86	53	.....	.....	84	58	79	53
8	76	52	73	50	70	47	68	49	72	46	78	45	71	51	77	56	82	57	81	59	72	53	.....	.....	76	61	69	52
9	87	48	84	41	80	39	78	46	77	39	74	48	78	43	77	49	80	50	76	51	81	47	.....	.....	80	52	75	51
10	96	56	96	54	92	42	91	48	87	48	83	40	88	42	85	43	87	50	86	47	90	55	.....	.....	93	58	85	53
11	98	62	96	54	98	60	98	57	97	58	87	51	95	55	90	47	88	53	88	54	98	57	.....	.....	95	58	88	55
12	92	71	83	60	80	54	79	63	87	58	86	57	81	55	90	57	91	54	90	65	90	64	.....	.....	95	66	81	58
13	85	63	73	56	73	53	74	55	70	55	79	44	74	56	78	57	88	63	77	64	81	55	80	67	82	60	77	55
14	86	58	80	52	81	51	68	54	75	54	73	57	76	55	80	53	89	60	80	58	79	55	76	57	80	59	78	59
15	84	58	73	55	.....	.....	81	56	79	54	75	68	67	51	87	56	90	57	86	62	94	56	82	55	92	61	92	56
16	75	53	66	42	63	45	64	49	67	45	75	67	65	42	73	57	86	55	75	60	75	51	64	47	75	58	70	52
17	75	44	70	39	74	36	72	43	69	38	80	64	70	38	74	51	88	57	74	55	74	56	72	44	78	55	68	54
18	86	54	80	46	86	40	80	54	80	47	88	64	84	42	79	52	81	51	78	49	84	56	80	49	83	61	81	57
19	97	57	92	49	95	50	88	60	90	48	86	65	95	48	86	54	95	56	91	56	100	58	88	53	96	64	90	56
20	106	52	88	53	95	62	94	63	92	62	89	64	93	51	94	55	94	58	91	59	102	58	93	58	99	60	95	63
21	96	60	75	56	78	53	93	55	81	56	78	56	71	57	92	57	97	60	92	63	106	64	90	57	99	65	95	65
22	84	57	74	54	64	45	62	51	68	54	72	64	63	47	60	56	90	56	78	56	78	56	64	54	73	60	77	58
23	85	53	63	44	65	42	64	45	62	47	75	68	63	46	74	46	87	48	88	49	78	52	65	45	78	55	74	49
24	82	43	56	44	54	42	58	44	52	37	68	60	51	41	77	46	78	57	64	48	78	.....	56	43	64	48	56	41
25	67	34	68	32	68	34	67	42	64	33	76	52	64	36	67	46	83	44	68	46	69	37	64	36	69	45	67	39
26	84	38	77	35	80	31	78	38	75	35	75	62	73	38	82	36	88	41	80	38	88	41	76	38	86	46	83	39
27	78	42	74	49	70	45	73	48	71	46	70	58	69	52	83	40	94	57	88	56	91	60	72	52	87	62	85	56
28	70	44	76	44	77	37	76	44	74	38	75	62	74	46	77	50	83	55	76	49	86	52	76	43	86	54	81	51
29	73	43	73	50	89	56	90	56	85	45	83	63	82	52	87	57	92	67	85	61	100	.....	89	59	100	61	91	54
30	93	47	77	44	68	46	69	44	67	44	70	64	64	42	82	51	79	51	75	53	78	.....	70	47	76	53	72	50
31	79	45	72	44	83	33	80	40	78	40	69	64	74	42	69	38	88	45	75	43	82	50	77	51	78	50	82	43
Mns	85.0	53.5	78.9	49.3	78.7[d]	46.7[a]	78.2	51.4	77.8	48.0	78.0	56.8	76.0	48.4	80.6	51.1	87.4	54.8	81.6	54.5	86.4	54.7[c]	76.4[b]	50.6[b]	84.8	57.7	80.1	53.8

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 6*—Continued.

Date.	South Dakota.						Colorado.						Nebraska.					
	Sioux Falls.		Watertown.		Yankton.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.		Hay Springs.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	95	70	93	56	96	58	97	63	97	63	96	58	96	56	96	61	96	58
2	94	71	91	56	93	58	96	61	96	61	94	60	95	55	95	59	94	56
3	95	68	91	56	95	58	101	63	97	61	96	62	96	55	96	61	96	58
4	93	68	86	49	94	56	98	63	96	60	96	62	96	55	96	61	96	58
5	90	66	86	49	93	56	97	63	96	60	96	62	96	55	96	61	96	58
6	93	68	91	56	96	58	97	63	96	61	96	62	96	55	96	61	96	58
7	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
8	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
9	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
10	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
11	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
12	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
13	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
14	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
15	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
16	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
17	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
18	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
19	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
20	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
21	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
22	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
23	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
24	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
25	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
26	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
27	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
28	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
29	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
30	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
31	95	68	91	56	96	58	101	63	97	61	96	62	96	55	96	61	96	58
Mns.	93.1	57.14	80.3	53.3	80.9	58.6	84.7	56.4	86.5	55.3	85.2	58.6	87.2°	51.3°	83.2	59.2	83.6	49.6°

Date.	Nebraska.								Kansas.						Missouri.			
	Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha.		Valentine, Nebr.		Clarinda, Ia.		Sibley, Ia.		Sioux City, Ia.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	94	63	96	62	96	62	96	62	96	68	94	63	94	61	94	61	96	70
2	94	61	94	60	94	60	94	60	94	68	92	60	92	57	92	57	94	68
3	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
4	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
5	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
6	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
7	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
8	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
9	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
10	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
11	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
12	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
13	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
14	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
15	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
16	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
17	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
18	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
19	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
20	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
21	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
22	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
23	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
24	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
25	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
26	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
27	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
28	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
29	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
30	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
31	96	63	96	62	96	62	96	62	96	68	96	63	96	61	96	61	96	70
Mns.	95.8	62.7	95.8	61.8	95.8	61.8	95.8	61.8	96.0	67.9	95.8	62.7	95.8	60.8	95.8	60.8	96.0	69.7

Date.	Missouri.																	
	Colby, Kans.		Concordia, Kans.		Salina, Kans.		Topeka, Kans.		Wakeeney, Kans.		Columbia.		Kansas City.		St. Louis.		Unionville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	96	68	96	68	96	68	96	68	96	68	96	68	96	68	96	68	96	68
2	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68
3	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
4	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
5	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
6	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
7	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
8	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
9	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
10	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
11	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
12	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
13	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
14	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
15	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
16	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
17	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
18	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
19	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
20	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
21	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
22	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
23	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
24	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
25	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
26	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
27	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
28	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
29	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
30	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
31	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70	96	70
Mns.	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7	95.8	69.7

Climatological Data for August, 1910.
DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

High temperatures prevailed generally during the first 3 days of the month, but from the 4th to 6th a cool wave overspread the district, carrying the maximum temperatures below 90° generally, and below 80° in some localities. From the 7th to the 15th moderate temperatures were general. From the 18th to the close of the month, temperatures were abnormally high, except for a comparatively cool period on the 25th and 26th. Temperatures were above 105° at many stations during the last decade.

Precipitation was entirely in the form of rain, except that two of the more elevated stations in the Colorado area reported a trace of snow. Periods of precipitation were not well defined. Showers occurred nearly every day, except that during the last decade there was very little precipitation in Oklahoma, Arkansas, and the Kansas, Texas, and Missouri areas. In the Tennessee area there were four periods of showers, viz: 3d and 4th, 7th and 8th, 17th and 20th, and 23d and 24th. The precipitation was generally well distributed and sufficient for agricultural needs. Excessive rains materially interfered with outdoor work in some localities.

TEMPERATURES.

Mean temperatures for the month were above the normal over the southeastern portion of the district, the excess ranging from 0.1° to 2.4°. Over the northern and western portions departures from the normal were not uniform, there being an excess in some localities and a deficiency in others; the departures ranged from −4.1° to +2.3°. The maximum temperature reached, or exceeded, 100° at a large number of stations in the central and western portions of the district, and many localities had temperatures of 105°, or higher. In the eastern portion the monthly maximum ranged generally between 90° and 100°. The highest temperature recorded was 115°, at Chickasha, Okla. These excessively high temperatures in the central portion of the district were usually accompanied by hot winds, resulting in much damage to vegetation. Over the northern and western portions of the districts the monthly minimum temperatures were below 50° generally, and in the more elevated parts of the Colorado and New Mexico areas they were below 40°. In the eastern portion the monthly minimums ranged generally between 60° and 70°, except in Louisiana, where the lowest temperatures ranged from 70° to 75°. The lowest temperature recorded was 26°, at Glen Eyrie and Lake Moraine, Colo.

Monthly mean temperatures and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 66.5°, 0.0°; New Mexico area, 70.6°, −0.5°; Texas area, 79.4°, +0.5°; Kansas area, 77.1°, −0.9°; Oklahoma, 81.0°, +0.1°; Missouri area, 75.5°, −0.9°; Tennessee, 77.5°, −0.6°; Arkansas, 79.2°, −0.4°; Mississippi area, 80.7°, +0.4°; Louisiana, 82.8°, +1.3°.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—More than the normal amount of precipitation occurred over this drainage area, except in Colorado, where the average from 27 stations was 1.77 inch, being about 0.4 inch below the normal. Over the Arkansas Valley proper, below the Colorado-Kansas line, and the Canadian Valley the precipitation averaged above the normal and was uniformly distributed, the average being about 3.80 inches. Heavy precipitation occurred over the Cimarron Valley, the average being 5.22 inches; 3 stations in that part of the valley that lies in Oklahoma reported more than 7 inches. An area of heavy precipitation also covered the Verdigris and Neosho valleys; the average for the Verdigris Valley being 4.31 inches and the Neosho Valley, 5.33 inches. The departures from the normal precipitation in the several valleys differed materially and are as follows: For those portions of the Arkansas proper that lie in Kansas and Oklahoma, about +0.8 inch; for that part which is below the Oklahoma-Arkansas line, +0.3 inch; for the Canadian Valley in New Mexico, +1.86 inch; for those portions of the Canadian Valley that lie in Texas and Oklahoma, +0.5 inch; the Cimarron Valley, +2.4 inches; the Verdigris Valley, +1.1 inch; and the Neosho Valley, +1.4 inch.

Red River and tributaries.—Over those portions of the Red River Valley that lie in New Mexico, Texas, and Oklahoma the precipitation from 35 stations averaged 2.81 inches. Slight deficiencies and excesses nearly counterbalanced each other. Over those portions of the Red River that lie in Arkansas and Louisiana the precipitation was heavier. The average from 18 stations was 4.14 inches, being about 1.1 inch above the normal. Four stations in that part of this valley that lies in Arkansas reported more than 6 inches.

Mississippi south of St. Louis and small tributaries.—Less than the normal amount of precipitation occurred over this drainage area, except that there was an excess in the Yazoo and Ouachita valleys. The amounts of precipitation and departures from the normal for the several valleys differ materially. In the immediate Mississippi Valley the amounts from 43 stations averaged 2.46 inches, being about 0.8 inch below the normal. Over the Valley of the White River the average from 19 stations was 3.29 inches, being about half an inch below the normal. The precipitation was unevenly distributed over the Yazoo Valley, and heavy local rains at a few stations brought the average up to 3.31 inches, which is about 0.4 inch above the normal. The average precipitation in the Valley of the Big Black was 2.38 inches, which is about 2 inches below the normal. In that portion of the Ouachita Valley that lies in Arkansas all stations except one reported an excess of precipitation, and more than 6 inches of precipitation occurred at four stations. Over that portion of this valley that lies in Louisiana the precipitation was below the normal. The average from 19 stations in Arkansas and Louisiana was 4.13 inches, being about 1.4 inch above the normal.

Louisiana coastal plain.—Heavy precipitation occurred locally in this area, but there was a deficiency at most stations. Three stations reported more than 10 inches. The average from 26 stations was 5.37 inches, being about 0.8 inch below the normal.

Monthly precipitation and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 1.82, −0.30; New Mexico area, 3.92, +2.01; Texas area, 2.83, +0.18; Kansas area, 4.23, +1.15; Oklahoma, 3.94, +1.14; Missouri area, 3.18, −0.10; Tennessee area, 1.90, −1.03; Arkansas, 3.92, +0.81; Mississippi area, 3.16, −0.63; Louisiana, 4.42, −0.51.

RIVERS.

Streams in Oklahoma were higher in August than at any time during the summer. No floods occurred, but the North Canadian and the Cimarron were bank full during a part of the month.

Changes in the Red River were slight, except that there was a rise at Fulton during the second decade of the month.

Low stages prevailed in the Arkansas Basin. The highest stage at Little Rock was 6.0 feet, on the 17th, and the river was not navigable, except during the latter half of the month. Mr. H. F. Alciatore, Section Director, Little Rock, says: "This has

been one of the most unfavorable seasons for navigation on the Arkansas in many years."

Relatively low stages prevailed in the White River during the greater part of the month.

Changes in the upper Ouachita were slight, but a moderate rise occurred below Camden toward the close of the third decade as a result of heavy rains in southeastern Arkansas.

Below St. Louis the Mississippi fell steadily at all stations, except that there was a slow rise in progress at the close of the month from Memphis to Vicksburg.

NOTES.

Colorado.—Frost occurred in some localities on either the 25th or 26th, but no serious damage resulted.

Fort Union, N. Mex.—Hail did considerable damage to growing crops. Lightning killed several head of live stock on the range.

Valley, N. Mex.—A cloud-burst ,on the 14th, near the head of the canyon, caused the greatest flood in the canyon in 10 years.

Archer, Tex.—Hot winds occurred on the 3d and 23d.

Bonham, Tex.—Hot winds occurred on the 2d.

Plemons, Tex.—Hot winds occurred on the 22d and 23d.

Tulia, Tex.—Hot winds occurred on the 1st, 2d, 3d, 24th, 28th, and 29th, damaging crops. Corn is a failure.

Kansas (T. B. Jennings, Section Director).—Heavy precipitation during the last few days of the month, in the Cottonwood Valley, rendered roads almost impassible, stopped alfalfa cutting, and damaged some alfalfa seed. A hailstorm, which occurred in Hamilton County on the 12th, was especially destructive to crops. Hot winds occurred in the Cimarron Valley on the 2d, and Barber, Kingman, and Reno counties on the 22d and 23d. Light frost occurred on the 26th in the Arkansas Valley from Dodge City to Winfield.

Missouri (George Reeder, Section Director).—The weather during the month was favorable for agriculture, except in a few localities. Outdoor occupations progressed along normal lines.

Arkansas (H. F. Alciatore, Section Director).—There was a great deficiency in sunshine generally; at Little Rock the sunshine was the lowest of record for August. The humidity was exceedingly high both morning and evening.

TABLE 1.—*Climatological data for August, 1910. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days		
Colorado.																				
Blaine	Baca	3,935	18	76.2	+ 0.4	99	2†	53	18	38	2.89	+ 1.16	1.40	0.0	5	13	17	1	s.	M. M. Myers.
Buena Vista	Chaffee	7,955	10	57.6	.....	78	24	32	26	44	0.41	.....	0.31	0.0	2	...	...	...	w.	C. A. Short.
Calhan	El Paso	6,700	3	64.6	.....	86	24†	33	25	45	2.79	.....	0.45	0.0	12	7	22	2	sw.	H. B. Rice.
Canon City	Fremont	5,329	22	71.2	− 1.4	93	7†	35	26	56	1.38	− 0.42	0.31	0.0	11	...	...	...	.....	G. C. Sherwood.
Colorado Springs	El Paso	6,098	30	66.0	− 0.9	88	24	34	26	42	1.52	− 0.68	0.86	0.0	12	8	19	4	.....	Colorado College.
Cripple Creek	Teller	9,396	9	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	F. G. Willis.
Cuchara Camps	Huerfano	8,200	...	.....	.....	.....	...	.....	...	...	0.21	.....	0.12	0.0	3	22	7	2	sw.	Geo. A. Mayes.
Eads	Kiowa	4,209	3	73.8	.....	99	22†	42	25	43	2.46	.....	2.25	0.0	2	...	...	...	se.	W. H. Lauck.
Fairview	Custer	9,500	1	.....	.....	.....	...	.....	...	...	2.48	.....	0.73	0.0	12	4	25	2	ne.	Elizabeth L. Gray.
Florence	Fremont	5,185	1	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	W. G. Fish.
Fremont	El Paso	8,850	...	57.4	.....	77	7†	28	25	44	3.31	.....	1.02	0.0	24	2	25	4	w.	U. S. Forest Service.
Garfield	Chaffee	9,510	...	.....	.....	.....	...	.....	...	...	1.68	.....	0.30	0.0	18	24	5	2	.....	Lloyd N. Felton.
Glen Eyrie	El Paso	6,500	18	63.8	− 1.7	90	27	26	26	52	0.14	− 2.17	0.05	0.0	5	8	22	1	.....	Calixto Bertolotti.
Hamps	Elbert	5,400	17	67.0	+ 0.2	90	20†	34	26	49	2.35	+ 0.28	0.97	0.0	10	14	8	9	s.	W. Hamp.
Hermit Lake	Custer	10,000	...	.....	.....	.....	...	.....	...	...	3.18	.....	0.55	0.0	10	14	13	4	sw.	John E. Graham.
Hoehne (near)	Las Animas	5,700	18	73.0	+ 3.5	108	24	41	25	51	3.22	+ 1.46	1.25	0.0	9	19	11	1	sw.	S. W. DeBusk.
Holly	Prowers	3,380	15	75.2	− 1.5	103	2	38	26	44	1.84	+ 0.29	0.56	0.0	10	19	9	3	se.	Holly Sugar Co.
Lake Moraine	El Paso	10,265	16	52.0	− 1.3	70	27	26	25	38	4.56	+ 1.11	1.44	T.	14	2	21	8	sw.	Clyde C. Mc Reynolds.
Lamar	Prowers	3,592	20	77.8	+ 0.8	105	20†	44	26	51	0.91	− 1.04	0.38	0.0	6	15	13	3	se.	J. T. Lawless.
Las Animas	Bent	3,899	42	75.6	+ 0.5	103	21	41	26	51	1.08	− 0.62	0.63	0.0	3	11	2	18	ne.	F. M. Tague.
La Veta Pass	Costilla	9,000	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Norman R. Lively.
Leadville	Lake	10,248	14	54.4	+ 0.5	75	18	32	25	38	1.07	− 0.48	0.40	0.0	15	2	23	6	n.	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	3	66.4	.....	92	27	31	25	50	1.71	.....	0.66	0.0	7	25	6	0	se.	John Lesher.
Madrid	Las Animas	.....	...	.....	.....	.....	...	.....	...	...	0.80	.....	0.26	0.0	8	...	...	...	.....	Thos. Sawyers.
Marshall Pass	Saguache	10,846	7	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	W. D. Lillard.
North Lake	Las Animas	8,700	...	.....	.....	.....	...	.....	...	...	2.53	.....	0.98	T.	7	18	12	1	nw.	James W. Ingmire.
Pueblo	Pueblo	4,734	22	71.2	− 0.9	97	24	39	26	49	2.43	+ 0.36	1.22	0.0	11	12	17	2	se.	U. S. Weather Bureau.
Rocky Ford (near)	Otero	4,177	21	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	P. K. Blinn.
St. Elmo	Chaffee	9,500	...	.....	.....	.....	...	.....	...	...	1.94	.....	0.40	0.0	14	13	15	3	sw.	Daniel Clark.
Salida	do	7,035	12	63.0	− 1.5	87	21†	34	26	51	1.85	+ 0.42	0.60	0.0	8	...	...	...	.....	M. D. L. Buell.
Sheridan Lake	Kiowa	4,065	9	74.6	.....	100	22†	39	25	48	3.00	.....	1.28	0.0	5	27	2	2	se.	Howard Gamble.
Stonewall	Las Animas	8,000	4	.....	.....	.....	...	.....	...	...	1.35	.....	0.39	0.0	11	4	24	3	.....	J. W. Shouse.
Trinidad	do	5,994	14	.....	.....	.....	...	.....	...	...	0.42	− 1.89	0.30	0.0	8	21	8	2	.....	Mrs. Mattie Butler.
Victor (near)	Teller	10,100	6	61.4	.....	79	7†	32	25	36	1.39	.....	0.50	0.0	7	21	9	1	e.	Fred Jones.
Vilas	Baca	3,935	19	.....	.....	.....	...	.....	...	...	2.44	+ 0.92	1.47	0.0	5	11	18	2	.....	Carrie Konkel.
Westcliffe	Custer	7,864	16	61.2	+ 0.8	85	27	32	26	50	1.10	− 0.50	0.32	0.0	11	4	19	8	nw.	Zack Jordan.
Winfield	Chaffee	9,765	...	.....	.....	.....	...	.....	...	...	1.55	.....	0.51	0.0	15	1	28	2	sw.	John G. Payne.
Wortman	Lake	11,250	9	.....	.....	.....	...	.....	...	...	1.35	− 2.02	0.30	0.0	11	1	23	7	nw.	Geo. C. Wortman.
New Mexico.																				
Abbott	Mora	5,771	1	.....	.....	102	24	49	26	...	4.08	.....	1.67	0.0	10	10	16	5	w.	El Paso & Southwest. R. R.
Albert	Union	4,700	19	76.0	− 0.5	100	24	46	26	39	3.63	+ 1.21	1.43	0.0	11	10	19	2	s.	Andrew Knell.
Arch (near)	Roosevelt	4,634	1	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Wm. A. Elliott.
Aurora	Colfax	8,849	1	.....	.....	.....	...	.....	...	...	2.42	.....	0.53	0.0	21	0	31	0	nw.	Miss Juanita Lucero.
Bell Ranch	San Miguel	4,500	11	77.5	.....	100	31†	50	6†	47	2.69	+ 0.68	0.71	0.0	9	7	19	5	s.	C. M. O'Donel.
Black Lake	Colfax	8,348	1	.....	.....	.....	...	.....	...	...	1.33	.....	0.26	0.0	10	6	18	7	w.	Ralph T. Martinez.
Cabeza	San Miguel	5,406	1	.....	.....	.....	...	.....	...	...	3.62	.....	0.90	0.0	11	5	23	3	sw.	El Paso & Southwest. R. R.
Campana	do	4,493	1	.....	.....	.....	...	.....	...	...	3.45	.....	1.00	0.0	9	7	17	7	w.	Do.
Chacon	Mora	9,000	1	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Alfredo Lucero.
Cimarron (near)	Colfax	6,385	6	67.2	.....	90	24	36	26	41	2.27	.....	0.61	0.0	13	11	15	5	e.	Wm. French.
Clayton	Union	5,178	5	73.0	.....	99	22	42	23	55	1.98	.....	0.61	0.0	10	12	18	1	w.	Dr. W. W. Chilton.
Clovis	Curry	4,129	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	A. Mendenhall.
Cuervo	Guadaloupe	4,849	1	77.5	.....	99	21	52	31	37	3.16	.....	1.18	0.0	11	10	17	4	s.	El Paso & Southwestern R.
Dawson	Colfax	6,396	1	.....	.....	.....	...	.....	...	...	6.10	.....	1.66	0.0	13	9	7	15	.....	Do.
Dorsey (near)	do	6,000	7	68.9[b]	.....	93	1	43[b]	25	34[b]	4.12	.....	0.97	0.0	12	7	24	0	e.	Geo. T. Lambert.
Elizabethtown	do	8,465	4	58.7	.....	83	22	35	26	44	3.38	.....	1.02	0.0	11	5	23	3	w.	Miss Mabel Carrington.
Folsom	Union	6,399	10	.....	.....	.....	...	.....	...	...	5.38	+ 2.75	1.66	0.0	15	8	22	1	s.	David Rope.
Fort Union	Mora	6,835	50	65.2	− 1.7	86	24†	41	26†	45	6.17	+ 2.22	1.98	0.0	12	14	10	7	sw.	M. C. Needham.
Hayden	Union	4,444	1	.....	.....	.....	...	.....	...	...	6.57	.....	4.26	0.0	5	...	...	...	.....	Geo. L. Cook.
Johnsons Park	Colfax	6,722	1	.....	.....	.....	...	.....	...	...	2.12	.....	0.90	0.0	9	2	24	5	sw.	A. J. Meloche, jr.
Kappus	Quay	4,000	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Anthony Kappus.
Lake Alice	do	7,160	1	.....	.....	.....	...	.....	...	...	3.39	.....	1.36	0.0	11	...	...	...	s.	Raton Water Co.
Logan	Quay	3,851	4	77.4	.....	100	24	46	26	42[b]	4.38	.....	1.02	0.0	8	23	7	1	se.	John B. Reneau.
Los Alamos	San Miguel	6,789	5	.....	.....	.....	...	.....	...	...	4.54	.....	1.00	0.0	10	...	...	...	.....	Wm. Frank, sr.
Lykins (near)	Roosevelt	5,000	...	.....	.....	.....	...	.....	...	...	4.93	.....	2.20	0.0	9	1	26	4	se.	J. G. Buchanan.
Maxwell (near)	Colfax	5,894	3	.....	.....	.....	...	.....	...	...	3.79	.....	0.83	0.0	10	...	...	...	.....	D. N. Jackson.
Melrose	Curry	4,400	2	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Dr. B. M. Porter.
Miami Ranch	Colfax	6,000	2	68.0	.....	90	1	38	26	43[b]	3.12	.....	1.41	0.0	10	14	15	2	w.	Farmers' Devel. Co.
Montoya	Quay	4,335	1	.....	.....	.....	...	.....	...	...	9.83	.....	5.50	0.0	13	0	22	9	w.	El Paso & Southwest. R. R.
Mount Dora (near)	Union	5,600	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Edward F. Grygla.
Nara Visa	Quay	4,225	4	76.5	.....	97	2†	48	26	41	3.06	.....	0.70	0.0	12	20	9	2	s.	Willard Belknap
Optimo (near)	Mora	6,400	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	R. K. Odell.
Passamonte	Union	.....	...	.....	.....	.....	...	.....	...	...	4.63	.....	1.36	0.0	10	7	15	9	sw.	J. J. Heringa.
Raton	Colfax	6,660	12	68.2	− 0.2	91	24	40	25†	43	4.98	+ 2.86	1.73	0.0	16	15	16	0	s.	Prof. R. C. Crum.
Rociada	San Miguel	8,200	6	64.0	.....	86	24	37	27	47	3.72	.....	1.50	0.0	9	8	18	5	s.	Jose A. Baca.
Rosebud	Union	4,500	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	M. T. Nix.
Roy	Mora	5,884	1	.....	.....	.....	...	.....	...	...	2.67	.....	0.70	0.0	9	0	26	5	sw.	El Paso & Southwest R. R.
San Jon	Quay	4,200	3	77.0	.....	100	2	48	26	33	4.74	.....	1.77	0.0	11	16	7	8	sw.	Jesse T. White.
Solano (1)	Mora	5,622	1	72.5	.....	97	21	46	25	41	2.14	.....	0.57	0.0	13	9	8	14	sw.	F. M. Hughes.
Springer	Colfax	5,857	14	70.0	+ 0.3	98	1	38	25	51	4.45	+ 2.33	1.20	0.0	10	9	13	9	w.	Atchison, Topeka & S. F. R.
Taylor	do	5,661	...	.....	.....	.....	...	.....	...	...	2.75	.....	1.00	0.0	13	4	10	17	s.	El Paso & Southwest. R. R.
Trementina	San Miguel	5,000	2	.....	.....	.....	...	.....	...	...	3.76	.....	1.03	0.0	9	9	21	1	sw.	Miss Alice Blake.
Tucumcari (1)	Quay	4,194	5	77.2	.....	99	2	49	25	46	5.88	.....	2.75	0.0	12	12	18	1	sw.	John F. Seaman.
Valley	Union	5,000	5	.....	.....	.....	...	44	25	...	4.40	.....	1.80	0.0	4	18	13	0	s.	Mrs. M. Letitia Payne.
Vermejo Park	Colfax	7,600	5	60.0[b]	.....	84	1†	38[a]	10	44[a]	2.26	.....	0.48	0.0	11	0	9	22	w.	H. W. Adams.
Wagon Mound (near)	Mora	6,300	1	67.7	.....	92	24	43	27	47	3.08	.....	0.66	0.0	14	8	13	10	se.	Guy L. Barnes.
Texas.																				
Amarillo	Potter	3,676	18	76.3	+ 1.7	99	28	49	26	36	2.19	− 0.62	0.72	0.0	10	18	13	0	s.	U. S. Weather Bureau.
Archer City	Archer	.....	...	.....	.....	.....	...	.....	...	...	1.15	.....	0.79	0.0	5	22	8	1	se.	Chas. H. Thuman.
Arthur City	Lamar	590	18	.....	.....	.....	...	.....	...	...	4.05	+ 2.11	2.00	0.0	6	13	6	12	.....	J. B. Wheeler.
Bonham	Fannin	566	7	85.4	.....	108	3	61	27	36	2.05	.....	0.72	0.0	5	11	10	10	se.	B. S. Lovelace.
Canadian	Hemphill	2,339	3	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	Canadian Academy.
Childress	Childress	1,869	17	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	W. E. Davis.
Chillicothe	Hardeman	1,406	2	.....	.....	.....	...	.....	...	...	.....	.....	.....	...	...	...	...	...	.....	A. B. Connor.
Clarendon	Donley	2,719	5	79.6	.....	106	2†	48	26	43	4.71	.....	1.64	0.0	6	14	17	0	se.	J. B. McClelland.
Clarksville	Red River	442	18	83.0	− 0.7	104	3	61	27	28	3.25	+ 0.74	1.90	0.0	5	20	7	4	.....	J. W. O'Neill.
Claude	Armstrong	3,397	5	.....	.....	.....	...	.....	...	...	1.16	.....	0.50	0.0	7	...	...	...	.....	Ft. Worth & Denver Cy. Ry.
Dalhart	Dallam	3,998	5	74.6	.....	98	24†	42	26	44	3.00	.....	1.10	0.0	7	12	17	2	s.	F. L. Kennard.

TABLE 1.—*Climatological data for August, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Denison	Grayson		2								2.72		1.00	0.0	8	11	5	15	s.	J. B. Gibson.
Finley	Bowie										3.00		1.40	0.0	5	15	6	10	s.	Mrs. M. C. Myers.
Henrietta	Clay	915	18	84.7	0.0	108	2†	61	27†	39	0.74	− 1.71	0.25	0.0	5	15	7	9	s.	C. K. Brown.
Hereford	Deaf Smith	3,750	5	76.2		101	2	46	26	39	3.86		1.25	0.0	8	10	17	4	s.	A. C. Elliott.
Lewis Ferry	Bowie		1								6.52		3.00	0.0	7	13	8	10		P. G. Ruff.
Memphis	Hall	2,067	5	79.1		106	3	51	27	40	5.35		1.48	0.0	8	17	11	3		Ft. Worth & Denver City Ry.
Miami	Roberts	2,743	4	79.1		103	3†	44	26	47	2.91		1.46	0.0	7	17	14	0	s.	J. E. Kinney.
Mobeetie	Wheeler		16								1.05	− 1.92	1.05	0.0	1	13	10	8	se.	R. A. Choate.
Nazareth	Castro		4	75.1		101	2	48	25†	40	2.77		1.30	0.0	9	17	8	6	sw.	Rev. P. A. Kaelin.
Ochiltree	Ochiltree		2								3.85		2.25	0.0	6					S. J. Allen.
Pampa	Gray	3,226	1																	B. E. Finley.
Paris	Lamar	592	21	83.0	+ 1.0	104	2†	62	27	33	3.09	+ 0.75	1.27	0.0	8	14	4	13	se.	Robert A. Miller.
Plemons	Hutchinson		3	75.4		101	22†	39	26	43	3.13		1.51	0.0	11	14	13	4	se.	C. S. Solomon.
Quanah	Hardeman	1,563	5	82.4		107	23	55	26	36	1.85		0.90	0.0	4	14	6	11	se.	Wm. H. Crawford.
Ringo Crossing	Hopkins										2.23		0.87	0.0	4	14	1	16	sw.	H. J. Palmer.
Romero	Hartley			77.0		101	22	48	25	36	1.92		0.46	0.0	15	5	24	2	s.	R. S. Chamberlain.
Sherman	Grayson	745	17																	R. A. Gibbs.
Sulphur Springs	Hopkins	530	18																	O. M. Pate.
Texline	Dallam	4,694	5					44	26		2.87		1.01	0.0	9	14	12	5	s.	Ft. Worth & Denver City Ry.
Tulia	Swisher	3,501	12	77.4		106	2	48	26	47	3.75	+ 1.93	1.99	0.0	8	5	26	0	s.	Lou Mulhall.
Winfield	Titus										1.49		1.14	0.0	3	13	15	3	se.	J. C. Bostick.
Kansas.																				
Alden	Rice	1,684									5.52		3.60	0.0	3	12	0	18	s.	Percy Torrey.
Anthony	Harper	1,329	13	79.5		108	2†	47	27	40	2.76	− 0.40	1.40	0.0	7	6	21	4	se.	R. H. Beebe.
Ashland	Clark	1,951	22	78.0	− 1.6	107	2	42	26	44	4.99	+ 2.57	2.95	0.0	9	15	14	2	se.	C. W. Carson.
Burlington	Coffey	1,010	17	76.9	− 1.1	103	24	44	27	39	5.16	+ 0.43	2.34	0.0	8	5	24	2	s.	O. E. Sanford.
Chanute	Neosho	940	6	77.2		98	3	45	27	38	3.91		1.62	0.0	6	8	20	3	s.	Chase W. Brown.
Cimarron	Gray	2,700	4	74.8[d]		103	2	48	25	38[d]	5.60		2.20	0.0	8	1	21	5	se.	Fred Mallonee.
Coldwater	Comanche	2,090	13	78.4	− 1.7	106	2	43	26	40	1.67	− 0.71	0.36	0.0	9	18	9	4	s.	J. L. Stanley.
Columbus	Cherokee	808	20	77.2	− 0.2	96	23†	48	25†	33	3.75	− 0.24	1.78	0.0	7	17	8	6	se.	O. E. Skinner.
Coolidge	Hamilton	3,348	13	72.7	− 3.6	97	2†	40	26	39	3.40	+ 1.49	1.50	0.0	6	14	11	6	se.	W. R. Padley.
Cottonwood Falls	Chase	1,234	6	76.6		102	24	40	27	43	5.18		2.00	0.0	7	18	7	6	sw.	E. B. Greene.
Council Grove	Morris	1,234	1																	Jas. Sharpe.
Cunningham	Kingman	1,680	26	78.4[b]	0.0	106	23	46	26	38[b]	2.00	− 0.91	0.85	0.0	4	10	17	4	se.	W. H. Morton.
Dodge City	Ford	2,513	36	75.4	− 1.1	104	22	45	26	39	2.63	+ 0.04	0.58	0.0	13	10	17	4	se.	U. S. Weather Bureau.
El Dorado	Butler	1,291	8	77.4		102	24	44	26†	38	4.08		1.33	0.0	8	17	10	4	s.	W. Y. Miller.
Ellinwood	Barton	1,790	35	76.6	− 1.2	107	22	40	26	38	6.08	+ 3.00	3.12	0.0	12	7	20	4	se.	Martin Musil.
Emporia	Lyon	1,138	29	76.0	− 0.6	102	24	45	27	35	7.16	+ 3.33	1.80	0.0	10	11	14	6	s.	W. H. Boyles.
Eureka	Greenwood	1,412	14	77.6		103	24	43	27	40	4.87	+ 1.68	1.56	0.0	10	15	9	7	s.	T. C. Peffer.
Fall River	...do	925	14	78.2	0.0	102	24	44	27	39	4.39	+ 1.23	1.50	0.0	7	14	16	1	se.	J. McDaniel.
Fargo	Seward		1											0.0						Ray Swink.
Fredonia	Wilson	864	7	78.2		101	3	48	26	34	4.94		2.00	0.0	6	17	9	5	se.	B. W. Holmes.
Garden City	Finney	2,836	21											0.0						B. F. Stocks.
Great Bend	Barton	1,850	1								2.98		1.08	0.0	10	19	7	5	se.	Isaac Pritchard.
Greensburg	Kiowa	2,235	3	76.7		104	2	41	26	40	3.32		1.37	0.0	8	22	4	5	s.	C. C. Raymond.
Grenola	Elk	1,116	23	77.7	− 0.2	107	2	44	27	39	4.06	+ 1.09	1.75	0.0	8	15	11	5	s.	R. M. Lawyer.
Howard§	...do	1,112	3								3.21		0.92	0.0	6	14	7	10	sw.	J. W. Eby.
Hugoton	Stevens		6	76.4		103	1	38	26	44	5.10		2.77	0.0	6	11	18	2	se.	E. M. Anderson.
Hutchinson	Reno	1,535	20	77.4	− 0.6	109	22	41	26	40	3.50	+ 0.72	1.38	0.0	8	15	10	6	s.	E. S. Webster.
Independence	Montgomery	816	37	79.2	− 0.6	102	24	44	27	42	3.14	− 0.01	1.40	0.0	6	15	6	10	s.	F. L. Kenoyer.
Iola	Allen	984	4	76.9	+ 0.6	98	22	46	27	35	3.55	+ 0.08	1.30	0.0	9	11	15	5	se.	U. S. Weather Bureau.
Irene	Hamilton	3,440		76.5		104	2†	39	26	48	1.67		0.81	0.0	4	15	14	2	sw.	N. M. Herbig.
Jetmore	Hodgeman	2,268	9	76.7		107	22	39	26	45	2.20		0.57	0.0	7	8	20	3	sw.	James Aiken.
Kingman	Kingman	1,504	2	78.0		105	2	42	26	36	3.97		2.02	0.0	8	8	19	4	sw.	B. B. Anawalt.
La Crosse	Rush	2,061	8	76.2		106	23	36	26	45	3.67		1.40	0.0	8	19	9	3	se.	Rodney Torrey.
Lakin	Kearney	2,993	20	74.0	− 3.3	103	2	37	26	40	2.73	+ 0.81	1.25	0.0	5	17	12	2	se.	C. H. Longstreth.
Larned	Pawnee	2,090	25	76.8		107	22	42	26	39[b]	6.09	+ 3.38	3.25	0.0	11	16	9	6		H. H. Wolcott.
Lebo	Coffey	1,138	24	75.4	− 1.6	98	24	46	26	33	6.55	+ 2.23	1.81	0.0	10	10	17	4	se.	J. J. Bowman.
Le Roy	...do	990	1																	F. W. Schmitt.
Liberal	Seward	2,843	3	76.6		104	2†	42	26	44	5.62		2.27	0.0	8	15	6	10	sw.	Dr. R. T. Nichols.
Macksville	Stafford	2,032	21	76.3	− 0.5	108	22	39	26	40	2.29	+ 0.71	1.08	0.0	7	6	11	14	ne.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	21	76.6	− 1.9	107	22	43	26	38	4.29	− 0.83	1.03	0.0	8	11	8	12	se.	Ed. F. Haberlein.
Madison	Greenwood	1,074	9	76.2		101	24	40	27	42	5.52	+ 1.65	2.48	0.0	7	7	20	4	se.	C. A. David.
Marion	Marion	1,310	17	76.0	− 2.9	103	22	42	26	39	7.43	+ 4.23	2.14	0.0	12	5	24	2	s.	Jerry Forney.
Medicine Lodge	Barber	1,259	17	78.4	− 2.1	108	2	44	26	40	3.03	+ 0.72	1.24	0.0	6	16	11	4	s.	S. P. Garrison.
Medora	Reno	1,484	1								5.26		1.64	0.0	9	15	1	16	s.	M. L. Richenbrode.
Mount Hope	Sedgwick	1,410	13								3.15	+ 0.21	1.21	0.0	6	19	6	6	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	5								5.59		1.50	0.0	9	17	2	12	s.	Susan P. Whipple.
Ness City	Ness	2,260	17								3.37	+ 0.63	1.06	0.0	10					J. K. Barnd.
Newton	Harvey	1,454	13	77.6	− 1.0	104	2†	43	26	38	5.48	+ 2.04	1.89	0.0	8	17	10	4	s.	H. A. Brush.
Norwich	Kingman	1,496	14	80.0	− 0.1	104	2†	47	26	39	4.34	+ 0.44	1.40	0.0	8	9	20	2	se.	N. I. Farris.
Oswego	Labette	899	16	78.1	− 0.7	98	23	49	26	28	4.57	+ 1.16	1.65	0.0	6	7	21	3	sw.	Jas. M. Currigan.
Plains	Meade	2,706		78.7[b]		102	2	48[b]	5	46[f]	1.36		0.70	0.0	4	16	7	6		E. J. Henning.
Pratt	Pratt	1,950	15																	E. H. Ellsworth.
Rome	Sumner	1,218	24	79.4	+ 1.1	107	2	43	26†	47	3.70	+ 0.63	1.12	0.0	6	19	5	7	s.	D. M. Adams.
Sedan	Chautauqua	834	25	79.2	+ 0.1	109	2	45	27	44	3.38	− 0.39	1.00	0.0	6	12	13	6	s.	A. Y. Buckles.
Toronto	Woodson	1,040	13	77.8	0.0	103	24	44	27	43	5.13	+ 2.01	1.52	0.0	6	14	1	16	s.	M. A. Webb.
Ulysses	Grand	3,027	19	76.4	− 2.0	103	2	42	26	44[b]	5.80	+ 4.38	3.00	0.0	6	12	11	8	s.	T. W. Marshall.
Walnut	Crawford	940	8	76.0		96	2	47	26	35	6.47		1.80	0.0	7	20	9	2	se.	R. C. Harlan.
Wichita	Sedgwick	1,377	23	77.4	− 0.1	103	23	48	26	33	4.52	+ 1.41	2.52	0.0	9	7	20	4	se.	U. S. Weather Bureau
Winfield	Cowley	1,124	16	77.6	− 1.7	104	2	45	26	36	3.93	+ 0.85	2.10	0.0	5	18	10	3		M. B. Light.
Yates Center	Woodson	1,068	31	77.2	+ 1.1	102	2	45	27	37	4.44	+ 1.33	1.75	0.0	7	7	22	2	sw.	J. W. Tipton.
Oklahoma.																				
Ada	Pontotoc	1,001	3																	Dr. J. P. McKinley.
Alva	Woods	1,350	6																	L. W. Sandefur.
Apache	Caddo	1,255	1	83.0		111	3	50	27	44[a]	1.76		0.93	0.0	6	22[a]	7[a]	1[a]	se.	G. D. Teeter.
Arapaho	Custer	1,575	17	81.0	− 0.2	106	3	50	26	36	4.76	+ 2.62	1.78	0.0	7	18	9	4	s.	Geo. E. Marsh.
Ardmore	Carter	872	9	83.0	− 0.3	109	3	59	27	33	2.77	+ 0.09	1.52	0.0	4	17	2	12	s.	H. T. Nisbett.
Bartlesville	Washington	687	4	80.2		108	2	49	27	36	3.79		1.17	0.0	5	17	9	5	se.	Dr. A. P. Owens.
Beaver	Beaver	2,500	14	81.1	+ 0.8	110	2	48	27	40	5.28	+ 3.55	1.60	0.0	8	24	4	3	s.	W. C. Fraser.
Blackburn	Pawnee	800	6																	J. Landis.
Cache	Comanche	1,350	5	80.6		108	3	47	27	42	2.06		0.85	0.0	7	20	8	3	se.	Frank Rush.
Calvin	Hughes	713	6								6.94		2.40	0.0	8	14	1	16	s.	Thomas Purcell.
Chandler	Lincoln	865	6	81.0		107	2†	55	26	37	4.07		1.45	0.0	7	14	1	16	s.	Chas. L. Tuttle.
Chattanooga	Comanche	1,150	5	83.4		111	3	57	27	39	2.33		1.20	0.0	7	19	7	5	se.	Squire Humble.
Chickasha	Grady	1,091	10	85.2	+ 1.9	115	3	50	27	46	1.17	− 0.79	0.55	0.0	4	26	4	1	s.	J. C. Good.
Cloud Chief	Washita	1,400	10	84.6	+ 3.0	113	3	51	27	45	1.40	− 0.98	0.48	0.0	5	10	19	2	se.	J. P. Stutzman.

TABLE 1.—*Climatological data for August, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Oklahoma—Cont'd.																			
Dacoma	Woods	1,337	13	75.8	− 4.1	105	3	39	26	45	4.49	+ 2.23	0.90	0.0	7	10	21	0	se.	R. H. Bruce.
Durant	Bryan	643	10	83.5	+ 1.5	108	3	63	27†	34	3.36	+ 0.52	1.02	0.0	7	14	2	15	s.	Nelson Houk.
Eldorado	Jackson	1,456	4																	T. W. Lanham.
El Reno	Canadian	1,400	19																	Pearl Maddox.
Enid	Garfield	1,269	11																	Uri. B. Worcester.
Erick	Beckham	2,058	7	81.5	.....	111	3	50	27	44	3.52	.....	1.90	0.0	8	12	17	2	s.	A. W. Hanes.
Fairland	Ottawa	839	11	78.7	− 0.7	102	3	47	26	34	6.04	+ 1.92	2.63	0.0	6	13	11	7	s.	C. W. Prior.
Fort Gibson	Muskogee	556	6								3.62	.....	1.08	0.0	9	11	3	17	se.	John T. Welsh.
Frederick	Tillman	1,293	7	84.0	.....	108	22	56	26	37	2.46	.....	1.54	0.0	7	17	10	4	se.	B. B. Bradley.
Gage	Ellis	2,136	8	78.3	.....	105	2†	43	26	47	4.66	.....	1.80	0.0	5	22	9	0	s.	C. H. Holmes.
Goodwell	Texas	3,300	...	77.0	.....	100	22†	43	26	48[b]	2.07[c]	.....	0.79	0.0	8[c]	.....	.....	.....	sw.	S. W. Black.
Guthrie	Logan	1,000	8	82.6	+ 1.6	107	2†	50	27	39	2.96	+ 0.08	1.05	0.0	6	10	15	6	.....	G. W. Derrick.
Guymon	Texas	3,133	1																	A. L. Mordt.
Harrington	Roger Mills	2,200	7																	T. Compton.
Hartshorne	Pittsburg	700	12	84.2	+ 0.4	106	3	58	27	36[c]	2.05	− 1.73	0.65	0.0	7	13[a]	7[a]	10[a]	s.	Edward Glendenning.
Healdton	Carter	900	17	82.9	+ 0.7	107	3	54	27	37	1.84	− 1.08	1.07	0.0	5	20	9	2	s.	C. H. Heald.
Helena	Alfalfa	1,396	3	79.8	.....	105	2	51	27	33	5.94	.....	2.55	0.0	8	18	13	0	s.	Frank Horsfall.
Hennessey	Kingfisher	1,166	16	80.2	− 3.5	109	2	51	27	41[a]	10.79	+ 7.91	3.20	0.0	7	12[a]	18[a]	0[a]	s.	W. W. Parks.
Hobart	Kiowa	1,396	7	84.4	.....	114	3	52	27	43	2.31	.....	1.00	0.0	6	9	21	1	s.	Roy Benedict.
Holdenville	Hughes	900	10	81.7	+ 0.6	106	2	55	27	36	2.49	− 1.32	2.05	0.0	5	20	6	5	s.	Miss M. Rutherford.
Hooker	Texas	2,999	5	76.6	.....	104	22†	42	26	42	2.39	.....	1.05	0.0	6	4	1	26	s.	H. M. Kelley.
Hurley	Cimarron	3,600	2	74.0	.....	100	22	41	25	40	3.90	.....	0.85	0.0	8	3	25	3	sw.	C. W. Meyers.
Idabel	McCurtain	474	3																	M. L. Henderson.
Jefferson	Grant	1,062	17	79.0	− 2.0	107	2	46	26	39	3.45	+ 0.14	0.85	0.0	8	11	17	3	s.	T. E. Beck.
Kenton	Cimarron	4,000	11	75.0	− 1.0	99	21†	44	26	45	3.16	+ 1.13	0.94	0.0	15	17	9	5	s.	L. A. Wikoff.
Kingfisher	Kingfisher	1,046	13	82.4	+ 0.5	107	3	48	27	44	3.55	+ 0.68	1.32	0.0	6	14	12	5	s.	J. C. Cross.
McAlester	Pittsburg	608	18	84.4	.....	108	3	60	26†	36	4.06	+ 0.50	2.11	0.0	7	21	6	4	s.	Wm. Noble.
McComb	Pottawatomie	1,200	16	82.4	+ 2.0	106	2†	57	25	31	2.66	− 0.39	1.25	0.0	5	13	18	0	se.	Jas. E. McNair.
Mangum	Greer	1,585	18	81.6	− 0.4	113	3	54	26†	43	2.66	+ 0.16	0.89	0.0	9	15	8	8	se.	M. J. Northcuff.
Marlow	Stephens	1,292	10																	W. B. Anthony.
Meeker	Lincoln	1,030	17	81.2	+ 0.3	110	3	47	27	38	5.29	+ 2.34	2.05	0.0	7	22	1	8	s.	Dr. J. B. Baugh.
Muskogee	Muskogee	614	12																	Prof. E. N. Collette.
Mutual	Woodward		4	78.5	.....	110	2	45	26	38	4.24	.....	1.15	0.0	4	20	7	4	s.	Thos. Martin.
Neola	Caddo	1,500	5	80.8	.....	110	3	53	26	40	3.26	.....	1.65	0.0	7	21	7	3	sw.	R. N. Schooling.
Newkirk	Kay	1,149	14	81.9	+ 0.4	109	2	48	26†	41	3.25	− 0.56	1.40	0.0	6	13	14	4	s.	P. H. Albright & Co.
Norman	Cleveland	1,171	17																	Walter H. Meier.
Oakwood	Dewey	1,854	...	78.0	.....	103	2†	49	26	33	6.41	.....	1.52	0.0	8	19	9	3	s.	Dr. F. P. Osborn.
Okeene	Blaine	1,194	7	80.6	.....	108	3	49	26	37	9.21	.....	4.35	0.0	8	21	8	2	s.	Dr. L. H. Murdoch.
Oklahoma	Oklahoma	1,247	21	80.8	+ 2.3	106	3	53	26	32	3.08	− 0.09	1.76	0.0	9	14	13	4	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	8	81.6[b]	.. ..	103	23†	58	28	37[m]	2.11[a]	.....	0.48	0.0	6[a]	14[c]	3[c]	11[c]	s.	J. L. Maynard.
Pauls Valley	Garvin	880	11																	A. M. Foss.
Pawhuska	Osage	918	12	81.5	+ 1.5	108	2	49	27	39	4.30	+ 0.48	1.44	0.0	7	8	17	6	s.	R. C. Block.
Perry	Noble	1,060	13	80.9	0.0	110	2	49	26	35	8.20	+ 4.58	3.41	0.0	8	20	8	3	s.	J. A. Douglas.
Ravia	Johnson	796	9	83.4	.....	108	3	60	27	35	1.81	.....	0.93	0.0	6	19	3	9	s.	R. G. Guptill.
Sac & Fox Agency	Lincoln	900	18	80.8	+ 0.5	106	3	55	26	32	5.26	+ 1.85	1.45	0.0	7	.....	.....	.....	.....	D. B. Taylor.
Shawnee	Pottawatomie	1,041	10	80.4	− 0.6	109	3	52	27	39	3.41	+ 0.37	0.93	0.0	8	12	4	15	s.	Neal R. Clark.
Snyder	Kiowa	1,356	4	83.4	.....	107	2†	55	26	35	1.43	.....	0.59	0.0	5	21	10	0	se.	Dr. W. C. Woodard.
Stillwater	Payne	880	18	80.2	− 0.2	108	2	51	27	39	4.97	+ 1.47	2.25	0.0	8	18	1	12	se.	J. M. Speidel.
Supply	Woodward	2,100	3																	A. H. Trumbo.
Tulsa	Tulsa	700	22	80.7	.....	106	2†	50	27	45	3.48	+ 0.53	1.60	0.0	6	0	30	1	s.	William Hall.
Vinita	Craig	698	7	78.5	.....	102	3	49	27	34[a]	5.60	.....	2.70	0.0	5	15	8	8	s.	C. E. Lahman.
Wagoner	Wagoner	588	14	80.2	− 0.5	103	23	52	27	33[a]	1.97[a]	− 1.22	0.64	0.0	7[a]	18[a]	6[a]	6[a]	s.	S. L. Hatfield.
Waukomis	Garfield	1,258	14	79.8	− 1.9	110	2	50	26†	40	7.67	+ 4.93	3.13	0.0	8	21	7	3	s.	R. C. Shades.
Waurika	Jefferson	988	...	83.8	.....	108	3	57	27	36	4.75	.....	3.84	0.0	7	21	6	4	e.	B. A. Swindler.
Weatherford	Custer	1,639	9	80.3	.....	109	3	50	27	45	4.82	.....	2.45	0.0	8	17	11	3	sw.	M. D. Reed.
Webbers Falls	Muskogee	479	12	81.3	+ 0.4	103	2†	58	26†	35	3.23	+ 0.43	0.80	0.0	11	4	25	2	e.	B. D. Boulineau.
Whiteagle	Kay	945	5	81.6	.....	104	2	50	26	33	3.05	.....	0.95	0.0	11	24	3	4	s.	J. M. Dankwardt.
Woodward	Woodward	1,886	1	77.8	.....	105	2	43	26	38	7.65	.....	3.54	0.0	9	18	11	2	s.	R. A. Boyle.
Missouri.																				
Belle	Maries		18																	A. J. Wofford.
Birchtree	Shannon	1,200	17	75.2[c]	− 0.9	95	30	50	27	35[c]	2.08	− 1.93	0.48	0.0	5	22[a]	6[a]	2[a]	s.	V. H. Kirkendall.
Cape Girardeau	Cape Girardeau	305	5																	D. L. Albert.
Caruthersville	Pemiscot		20	78.0	− 0.9	99	18	56	28	33	2.13	− 0.88	0.75	0.0	7	25	5	1	w.	H. E. Averill.
Dean	McDonald		11	77.3	− 1.1	97	3	48	27	34[b]	5.51	+ 1.49	2.14	0.0	4	21[b]	1[b]	7[b]	.....	H. E. Dean.
Doniphan	Ripley	440	6	76.3	.....	97	16	51	27†	34[a]	0.91	.....	0.18	0.0	7	17	10	4	ne.	W. W. Martin.
Farmington	St. Francois	889	3																	Miss Carrie Sneed.
Gano	Dent		7	75.4	.....	98	23	42	27	40	1.45	.....	0.51	0.0	6	17	9	5	se.	A. C. Leech.
Goodland	Iron	900	5	72.5	.....	97	30	42	27	42	1.76	.....	0.75	0.0	5	21	2	8	s.	F. M. Adams.
Greensville	Wayne		16	76.6	− 0.9	97	30	50	27	37	2.04	− 0.90	0.84	0.0	5	18	13	0	s.	A. G. Templeton.
Hollister	Taney	1,000																		W. P. Chapman.
Ironton	Iron	925	32	73.9	− 0.4	95	30	40	27	41	4.57	+ 1.14	1.40	0.0	7	9	11	11	s.	W. H. Delano.
Jackson	Cape Girardeau	458	19	75.5	− 0.2	95	30	50	27	35	3.32	+ 0.28	0.90	0.0	8	13	11	7	s.	L. M. Bean.
Joplin	Jasper	979	32	77.6	.....	97	22	56	26†	30	2.15	− 1.95	1.40	0.0	5	25	3	3	sw.	Miss E. Russum.
Koshkonong	Oregon	911	10	76.3	− 0.8	94	23	52	27	29	2.29	− 1.84	0.53	0.0	9	16	12	3	se.	J. W. Hitt.
Lamar	Barton	964	30	76.8	− 0.4	96	22	49	26	39	8.80	+ 4.83	3.69	0.0	7	13	12	6	se.	E. H. Adams.
Marble Hill	Bollinger	420	19	75.2	− 1.6	97	30	48	28	41	2.05	− 0.90	1.35	0.0	3	19	11	1	s.	A. F. Hemdrix.
Mountaingrove	Wright	1,490	11	73.2	.....	92	23	45	27	29	3.12	− 0.80	1.78	0.0	6	17	6	8	s.	Mo. Fruit Exp. Station.
Mount Vernon	Lawrence	1,480	34	76.8	− 1.1	99	24	50	27	34	3.30	− 0.80	1.11	0.0	6	20	8	3	se.	C. L. White.
Neosho	Newton	1,023	27	77.4	+ 0.5	95	3†	45	27	37	6.21	+ 2.34	2.39	0.0	7	21	7	3	se.	W. O. Buck.
New Madrid	New Madrid	285	16								2.79	− 0.70	1.20	0.0	9	21	2	8	se.	Miss Josie Smith.
Oakfield	Franklin	793	18	75.0	− 2.1	94	30	50	26	29	3.03	− 0.19	1.28	0.0	6	6	18	7	s.	E. E. Steines.
Olden	Howell	1,246	20	74.7	− 1.7	95	23	48	27	37	1.21	− 2.06	0.49	0.0	5	23	7	1	s.	J. D. Evans.
Perryville	Perry	582	1	75.2	.....	94	18	54	10	32	1.94	.....	0.50	0.0	5	21	0	10	s.	Superintendent of Schools.
Rolla	Phelps	1,092	29	74.8	.....	96	23†	46	27	36	3.80	+ 0.03	1.52	0.0	7	19	4	8	s.	Prof. P. J. Wilkins.
Sikeston	Scott	328	15	76.9	− 1.0	94	18†	52	27	32	3.61	+ 0.30	1.62	0.0	6	22	8	1	sw.	A. A. Harrison.
Springfield	Greene	1,350	22	74.4	− 0.4	92	23	51	27	25	4.65	+ 0.34	1.83	0.0	7	21	7	3	se.	U. S. Weather Bureau.
Steelville	Crawford	746	14	72.5	.....	99	30	43	29	50[a]	3.64	+ 0.24	0.97	0.0	6	16[a]	7[a]	7[a]	sw.[a]	Edwin Pumphrey.
Kentucky.																				
Blandville	Ballard	445	30	72.8	− 4.1	92	18	54	27	24	4.05	+ 1.03	1.53	0.0	7	11	18	2	sw.	E. W. Horr.
Lynnville	Graves		9	76.6	.....	98	30	45	26	35	0.74	.....	0.35	0.0	5	15	10	6	sw.	Wm. Scherffius.
Tennessee.																				
Arlington	Shelby		28	76.8	− 1.0	95	22	60	2†	31	2.08	− 1.23	1.20	0.0	3	15	8	8	s.	A. T. B. Etheridge.
Bolivar	Hardeman	450	23	77.7	− 0.1	95	18	60	24†	30	0.81	− 1.88	0.81	0.0	1	20	2	9	s.	Miss M. A. Smith.
Brownsville	Haywood	361	25	77.8	− 0.1	93	15†	59	27	30	2.88	+ 0.02	1.85	0.0	4	11	14	6	s.	Miss Hattie M. Moses.
Covington	Tipton	311	23	77.1	− 1.3	94	18	60	2†	25	1.69	− 1.67	0.90	0.0	4	24	0	7	se.	J. S. Ruffin.
Dyersburg	Dyer	310	27	77.6	− 0.3	95	17†	59	27†	30	3.95	+ 0.83	2.70	0.0	4	20	6	5	se.	Miss M. A. Sinclair.
Jackson	Madison	450	17																	Prof. S. A. Robert.

TABLE 1.—*Climatological data for August, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Tennessee—Cont'd.																				
Kenton	Obion	325	8	78.1	.....	100	18	55	27	34	1.08	.....	0.83	0.0	4	22	8	1	s.	G. S. Martin.
Memphis	Shelby	409	39	79.0	− 0.2	94	18	60	27	26	1.36	− 1.94	0.55	0.0	7	8	14	9	ne.	U. S. Weather Bureau.
Milan	Gibson	440	27	75.5	− 2.4	94	18	58	27	27	1.19	− 2.60	0.55	0.0	5	9	12	10	s.	O. F. Cantwell.
Trenton	....do	345	27	76.8	− 1.0	99	17†	55	2	36	2.21	− 0.89	1.14	0.0	3	24	5	2	sw.	Prof. F. L. Dennison.
Union City	Obion	360	12	79.0	+ 0.9	100	17†	55	27	41	1.83	− 0.88	1.22	0.0	4	15	16	0	se.	J. B. Kinsey.
Arkansas.																				
Alicia	Lawrence	.....	6	77.8[d]	.....	94	23	57	27	26[d]	3.55	.....	1.60	0.0	4	.....	.....	.....	.....	McCullough & Guelck
Amity	Clark	250	18	79.8	+ 0.1	101	8	52	27	36	4.12	− 0.21	1.10	0.0	10	8	9	14	sw.	Prof. S. M. Samson.
Arkadelphia (near)	....do	250	3	81.2	.....	101	7	62	28	28[a]	4.09	.....	1.90	0.0	7	10	12	9	nw.	J. A. Ross.
Arkansas City	Desha	145	27	.....	.....	.....	.....	.....	.....	.....	4.54	+ 1.39	1.86	0.0	5	.....	.....	.....	.....	W. C. Blundell.
Batesville	Independence	271	11	.....	.....	.....	.....	.....	.....	.....	3.38	.....	1.66	0.0	11	.....	.....	.....	.....	Miss Lelia I. Teter.
Bee Branch	Van Buren	.....	18	79.1	+ 0.2	99	30†	56	27	34	5.00	+ 1.91	1.90	0.0	7	12	13	6	.....	J. E. Scanlon.
Benton	Saline	283	3	80.8	.....	97	29†	60	28	26	3.66	.....	0.80	0.0	7	7	18	6	s.	J. E. Evans.
Bentonville	Benton	1,303	5	77.0	+ 0.5	97	23	50	27	30	3.92	− 0.12	2.84	0.0	4	19	11	1	s.	U. S. Weather Bureau.
Bergman	Boone	1,324	14	74.2	− 1.5	95	3	43	27	37	7.37	+ 4.13	2.15	0.0	8	19	10	2	nw.	John T. Maxey.
Black Rock	Lawrence	.....	6	.....	.....	.....	.....	.....	.....	.....	2.43	.....	0.55	0.0	9	.....	.....	.....	.....	S. J. Howe.
Brinkley	Monroe	226	24	79.2	− 0.1	98	23†	59	27†	39	1.12	− 1.50	1.01	0.0	2	12	10	9	.....	H. L. D. Whitson.
Calico Rock	Izard	361	6	.....	.....	.....	.....	.....	.....	.....	2.46	.....	1.08	0.0	8	.....	.....	.....	.....	W. H. Stoner.
Camden	Ouachita	158	25	81.3	+ 1.1	97	2†	62	27	27	9.76	+ 7.64	4.00	0.0	11	14	11	6	.....	R. H. Quarterman.
Centerpoint	Howard	.....	10	81.9	− 0.6	102	2	62	27	30	4.69	+ 2.53	2.13	0.0	6	9	15	7	se.	J. M. Huddleston.
Clarendon	Monroe	171	6	.....	.....	.....	.....	.....	.....	.....	2.25	.....	0.65	0.0	10	.....	.....	.....	.....	Mrs. B. E. Bishop.
Conway	Faulkner	309	27	79.2	0.0	98	23	59	27	30	2.53	− 0.72	1.44	0.0	7	10	17	4	se.	G. H. Burr.
Corning	Clay	293	18	76.8	− 1.4	94	22	54	28	34	3.09	− 0.68	2.22	0.0	8	11	14	6	s.	Jacob Brobst.
Dardanelle	Yell	330	24	78.8	.....	99	23	57	27†	32	2.68	− 0.59	0.86	0.0	6	17	6	8	.....	A. Bernard.
Dennard	Van Buren	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred B. Brown.
Dodd City	Marion	1,175	29	77.1	− 0.8	97	4	48	27	31[b]	6.62	+ 2.65	3.60	0.0	5	.....	.....	.....	.....	Neal Dodd.
Dutton	Madison	.....	9	77.4[c]	.....	98	3	55	28	34[c]	7.57	.....	2.79	0.0	9	.....	.....	.....	.....	Edward Mize.
Earl	Crittenden	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. J. Moss.
Eldorado	Union	265	6	81.6	.....	97	3	62	26	29	1.48	.....	0.35	0.0	10	12	7	12	.....	Jeff J. Babb.
England	Lonoke	.....	4	79.2	.....	96[b]	24	60	27	33[b]	3.36	.....	1.40	0.0	8	.....	.....	.....	.....	J. C. Chenault.
Eureka Springs	Carroll	.....	9	78.1	.....	98	22	48	27	35	2.82	.....	1.04	0.0	5	3	28	0	sw.	S. H. Britts.
Fayetteville	Washington	1,451	21	78.3	+ 2.0	99	23	49	27	35	2.07	− 2.33	0.61	0.0	7	17	10	4	sw.	University of Arkansas.
Fort Smith	Sebastian	481	28	80.9	+ 1.5	104	3	59	27	26	3.91	+ 0.25	1.29	0.0	10	13	8	10	e.	U. S. Weather Bureau.
Fulton	Hempsted	264	6	.....	.....	.....	.....	.....	.....	.....	3.44	.....	1.60	0.0	8	.....	.....	.....	.....	B. C. Logan.
Hardy	Sharp	643	12	77.0	− 1.9	97	23	53	27	33	1.79	− 1.69	0.55	0.0	10	6	19	6	sw.	C. A. Caywood.
Helena	Phillips	182	25	80.6	+ 0.2	99	30	62	2†	32	1.56	− 2.01	0.46	0.0	6	20	0	11	.....	B. F. Modisett.
Hot Springs	Garland	600	4	78.8	.....	98	8	60	28	30	5.53	.....	1.48	0.0	13	23	6	2	ne.	Hot Springs Water Co.
Huttig	Union	85	3	81.6	.....	98	3	63	27	26	3.83	.....	1.24	0.0	10	7	24	0	.....	C. A. Berry.
Jonesboro	Craighead	345	15	77.6	− 2.0	98	18†	55	27†	35	2.59	− 1.17	1.25	0.0	6	10	21	0	nw.	Benedictine Sisters.
Junction	Union	.....	17	81.8	+ 1.3	99	3	64	26	26	2.37	− 0.31	1.02	0.0	5	18	5	8	w.	J. A. Lowderback.
Lake Farm	Jefferson	195	3	80.0	.....	99	23	58	27	35	3.81	.....	1.05	0.0	7	8	19	4	s.	R. H. Gillespie.
Lewisville	Lafayette	262	7	82.6	.....	102	2†	63	27	27	4.74	.....	1.06	0.0	15	.....	.....	.....	.....	F. W. Youmans.
Little Rock	Pulaski	357	31	79.0	− 0.2	94	22	61	27	21	3.82	+ 0.17	1.32	0.0	11	8	16	7	e.	U. S. Weather Bureau.
Lutherville	Johnson	775	13	78.0	− 0.4	96	3†	55	27	30	4.26	+ 0.21	1.62	0.0	9	9	18	4	sw.	Herman Hentschel.
Malvern	Hot Spring	277	23	79.0	− 0.5	97	22	60	27	30	5.35	+ 2.33	1.73	0.0	11	6	11	14	.....	Miss L. C. Smith.
Mammoth Spring	Fulton	.....	6	75.2	.....	93	23	50	27	32	2.21	.....	0.54	0.0	7	17	13	1	.....	F. Wallick.
Marked Tree	Poinsett	.....	6	.....	.....	.....	.....	.....	.....	.....	1.64	.....	1.22	0.0	3	.....	.....	.....	.....	L. Smith.
Mena	Polk	1,100	24	79.4	− 0.1	97	2†	60	27†	26	0.67	+ 2.53	1.46	0.0	14	12	12	7	e.	R. R. St. John.
Mossville	Newton	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Theo. Ober.
Mount Nebo	Yell	1,750	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. G. Church.
Newport	Jackson	231	26	78.4	− 0.8	95	23	58	27	28	2.88	− 0.20	0.95	0.0	10	17	7	7	.....	L. R. Cobb.
Ozark	Franklin	377	19	79.1	− 3.0	98	21†	54	25	35	4.40	+ 0.44	1.35	0.0	9	19	12	0	e.	R. M. Adams.
Pine Bluff	Jefferson	215	22	80.7	− 0.7	98	23†	62	27†	31	7.04	+ 4.45	2.90	0.0	9	20	7	4	.....	J. M. Hudson.
Pocahontas	Randolph	.....	18	78.5	− 0.3	98	30	56	27†	34[a]	1.54	− 2.68	0.70	0.0	6	14	16	1	.....	Benedictine Sisters.
Pond	Benton	1,250	13	77.4	+ 0.2	96	23	51	27	34	1.79	− 1.95	0.80	0.0	5	1	24	6	sw.	A. F. Stevens.
Portland	Ashley	122	1	81.4	.....	97	22	66	28	27	2.64	.....	0.95	0.0	10	14	5	12	.....	L. W. Gregory.
Prescott	Nevada	327	22	81.6	+ 0.4	101	8	61	27	33	3.95	+ 1.12	1.13	0.0	10	19	6	6	.....	A. M. Ellsworth.
Rogers	Benton	1,385	19	77.0	− 0.9	95	3	51	27†	36	3.54	− 0.05	2.50	0.0	6	11	14	6	s.	Carl A. Stark.
Springbank	Miller	182	3	.....	.....	.....	.....	.....	.....	.....	6.80	.....	2.21	0.0	10	.....	.....	.....	.....	G. Field.
Stuttgart	Arkansas	495	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Buerkle.
Subiaco	Logan	1,050	13	80.4	− 0.7	98	3†	58	27	30	3.31	−0.60	1.87	0.0	8	18	9	4	ne.	New Subiaco Abbey.
Texarkana	Miller	332	26	81.7	0.0	100	2†	64	27†	27	7.24	+ 5.12	2.00	0.0	9	16	5	10	.....	D. E. Moore.
Warren	Bradley	304	15	81.0	− 0.7	97	3†	62	27	29	7.19	+ 4.21	2.43	0.0	10	6	13	12	.....	W. J. Savage.
Whitecliffs	Little River	206	6	.....	.....	.....	.....	.....	.....	.....	3.97	.....	1.65	0.0	9	.....	.....	.....	.....	John E. Payton.
Wiggs	Garland	.....	17	78.6	− 2.6	96	7	59	28	31	6.40	+ 2.46	1.41	0.0	13	7	21	3	sw.	S. D. Jester.
Wynne	Cross	.....	2	78.8	.....	96	22	57	27	32	0.90	.....	0.33	0.0	6	17	6	8	.....	R. R. Poole.
Mississippi.																				
Anguilla	Sharkey	107	2	81.2	.....	97	22	64	27	27	1.12	.....	0.45	0.0	5	16	9	6	ne.	E. W. Cook.
Austin	Tunica	200	14	79.7	+ 0.2	98	28	62	2†	32	2.31	− 1.60	1.03	0.0	6	19	9	3	s.	H. J. Irvine.
Batesville	Panola	230	22	79.6	+ 0.4	96	18	62	2†	29	3.07	− 0.18	1.60	0.0	6	21	2	8	e.	J. M. Cox.
Big Creek	Calhoun	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. P. Havens.
Byhalia	Marshall	390	1	.....	.....	.....	.....	.....	.....	.....	3.38	.....	1.48	0.0	6	8	22	1	gw.	Tallahatchie Dng. Com.
Canton	Madison	228	20	82.1	+ 1.7	100	31	63	2	33	1.29	− 2.28	0.45	0.0	9	3	28	0	se.	Dr. G. W. Smith-Vanis.
Charleston	Tallahatchie	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.86	.....	1.64	0.0	7	9	16	6	sw.	Tallahatchie Dng. Com.
Clarksdale	Coahoma	177	3	80.4	.....	97	18	63	2†	29	3.81	.....	0.95	0.0	8	17	4	10	se.	A. C. Tuttle.
Coffeeville	Yalobusha	241	1	.....	.....	.....	.....	.....	.....	.....	2.48	.....	1.70	0.0	7	15	15	1	s.	Tallahatchie Dng. Com.
Corinth	Alcorn	470	22	79.3	+ 0.9	96	19	60	1	31	1.23	− 2.36	0.70	0.0	6	18	6	7	ne.	M. A. Candler.
Crenshaw	Panola	187	1	.....	.....	.....	.....	.....	.....	.....	3.21	.....	1.36	0.0	10	10	19	2	se.	Tallahatchie Dng. Com.
Denmark	La Fayette	.....	1	.....	.....	.....	.....	.....	.....	.....	3.57	.....	1.41	0.0	7	.....	.....	.....	.....	Do.
Duck Hill	Montgomery	.....	11	80.4	+ 0.5	100	17	62	2	32	4.33	+ 1.12	2.10	0.0	4	15	13	3	s.	W. H. Eskridge.
Edwards	Hinds	222	23	82.4	+ 0.8	98	18†	67	27	31	2.53	− 1.48	1.60	0.0	5	15	16	0	s.	E. F. Parr.
Enid	Tallahatchie	.....	1	.....	.....	.....	.....	.....	.....	.....	4.39	.....	1.23	0.0	8	.....	.....	.....	.....	Tallahatchie Dng. Com.
Fayette	Jefferson	270	9	81.0	+ 1.1	97	14	65	30	30	3.41	− 1.67	1.60	0.0	7	13	17	1	se.	T. L. Darden.
Greenville	Washington	126	23	81.4	+ 0.1	96	18†	64	27	28	6.22	+ 2.47	2.39	0.0	6	19	2	10	se.	F. L. Harbison.
Greenwood	Le Flore	140	10	80.8	0.0	96	8†	64	2†	29	4.47	+ 0.95	1.73	0.0	8	18	5	8	e.	J. H. Stephen.
Grenada	Grenada	194	1	.....	.....	.....	.....	.....	.....	.....	6.06	.....	3.00	0.0	6	24	2	5	sw.	Tallahatchie Dng. Com.
Hernando	De Soto	391	22	79.0	− 0.6	96	18†	60	27	31	1.66	.....	1.20	0.0	5	15	6	10	ne.	Mrs. Sarah B. Jones.
Hickory Flat	Benton	435	1	.....	.....	.....	.....	.....	.....	.....	2.61	.....	1.06	0.0	5	11	19	1	sw.	Tallahatchie Dng. Com.
Holly Springs	Marshall	600	23	78.6	− 0.7	94	17†	60	27	27	2.64	− 1.08	0.76	0.0	8	18	0	13	se.	L. B. Mosby.
Kosciusko	Attala	437	20	79.7	+ 0.3	94	4†	63	2	27	2.20	− 1.69	0.91	0.0	8	22	8	1	se.	E. L. Lucas.
Lake Cormorant	De Soto	206	1	.....	.....	.....	.....	.....	.....	.....	1.91	.....	1.20	0.0	8	4	26	1	ne.	Tallahatchie Dng. Com.
Lula	Coahoma	182	1	.....	.....	.....	.....	.....	.....	.....	1.96	.....	0.76	0.0	6	25	6	0	.....	Do.
Malone	Marshall	.....	1	.....	.....	.....	.....	.....	.....	.....	3.00	.....	1.17	0.0	8	.....	.....	.....	.....	Do.
Marks	Quitman	163	1	.....	.....	.....	.....	.....	.....	.....	3.26	.....	2.10	0.0	10	.....	.....	.....	.....	Do.
Natchez	Adams	206	22	83.8	+ 2.1	99	22†	70	5†	28	3.45	− 1.31	1.18	0.0	14	15	5	11	n.	J. C. Weir, Jr.
New Albany	Union	398	1	.....	.....	.....	.....	.....	.....	.....	1.63	.....	0.86	0.0	5	17	14	0	s.	Tallahatchie Dng. Com.
Pontotoc	Pontotoc	475	21	78.6	− 0.1	93	18	60	2	28	2.23	− 1.41	1.16	0.0	4	14	16	1	nw.	Dr. C. W. Bolton.

TABLE 1.—*Climatological data for August, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Mississippi—Cont'd.																			
Port Gibson	Claiborne	116	22	81.7	+ 0.8	98	3	64	3	34	2.70	− 1.08	0.82	0.0	11	15	9	7	e.	H. H. Crisler.
Rosedale	Bolivar	143	2	80.4	.....	97	18	63	27†	31	1.44	.....	0.65	0.0	5	21	5	5	sw.	T. J. Murray.
Senatobia	Tate	284	1	.....	.....	.....	.....	.....	.....	.....	2.42	.....	1.19	0.0	8	19	0	12	sw.	Tallahatchie Dng. Com
Shoccoe	Madison	.....	7	80.3	.....	98	19†	62	2	30	3.51	.....	1.72	0.0	5	19	11	1	se.	J. C. Pitchford.
Suffolk	Franklin	.....	9	82.6	.....	99	31	68	30	30	2.94	.....	1.84	0.0	12	17	12	2	se.	Prof. Geo. H. Kent.
Swan Lake	Tallahatchie	148	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. F. Saunders.
Tchula	Holmes	130	5	81.0	.....	96	16†	63	2	28	3.90	.....	1.30	0.0	4	13	12	6	w.	Dr. M. P. Winkler.
University	LaFayette	502	17	79.4	− 0.1	95	18	61	27	26	2.89	− 0.67	1.00	0.0	7	18	10	3	s.	Prof. J. H. Dorroh.
Utica	Hinds	287	6	81.2	.....	96	17†	63	3	32	3.16	.....	0.90	0.0	14	17	8	6	s.	Dr. J. B. Dudley.
Vicksburg	Warren	247	39	81.8	+ 2.2	95	22	67	27	23	1.36	− 2.17	0.70	0.0	6	7	20	4	e.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	21	79.3	− 0.8	96	18	61	2	29	3.23	− 0.12	0.81	0.0	6	18	13	0	ne.	Miss Loula Erikson.
Woodville	Wilkinson	560	17	81.6	+ 0.4	95	9†	69	18†	26	4.64	− 0.92	1.15	0.0	11	15	16	0	se.	James E. Lee.
Yazoo City	Yazoo	116	16	81.2	− 1.2	97	4	64	2	30	8.92	+ 4.46	3.20	0.0	6	20	4	7	ne.	W. H. Courts.
Louisiana.																				
Abbeville	Vermilion	18	22	83.0	+ 1.4	97	22	72	13†	22	4.26	− 1.51	0.91	0.0	13	9	20	2	e.	Hon. C. J. Edwards.
Alexandria	Rapides	77	19	83.0	+ 0.9	100	9	69	13†	28	2.40	− 1.70	0.83	0.0	5	14	1	16	s.	Miss Nellie Graham.
Amite	Tangipahoa	130	22	82.2	+ 0.9	97	3	69	16†	26	6.82	+ 0.15	1.20	0.0	15	9	22	0	n.	Miss Lula M. Wentz.
Baton Rouge	E. Baton Rouge	35	22	83.2	+ 1.9	96	2†	69	20	26	1.67	− 3.90	0.49	0.0	10	21	3	7	ne.	Elmo M. Bott.
Burnside‖	Ascension	20	10	82.4[d]	+ 1.3	96	9	70	15†	23[d]	10.01	+ 4.74	4.00	0.0	16	.....	.....	.....	.....	C. S. McFarland.
Burrwood	Plaquemines	1	20	82.8	+ 0.6	93	13	71	1†	15	10.43	+ 2.58	4.50	0.0	10	17	8	6	ne.	Graham Myers.
Cades‖	St. Martin	.....	.....	81.8	.....	93	8†	71	13	20	4.02	.....	2.10	0.0	7	16	11	4	s.	C. E. Smedes.
Calhoun	Ouachita	180	17	82.2	+ 1.4	99	22	64	3	34	2.78	− 0.60	1.86	0.0	6	1	23	7	sw.	N. L. Exp. Station.
Cameron	Cameron	6	15	83.8	+ 1.9	93	10†	73	27	18	2.99	− 1.15	1.84	0.0	3	4	20	7	sw.	State Biologic Station.
Cheneyville	Rapides	67	20	82.7	+ 1.4	97	3†	68	30	26	4.27	+ 0.34	1.70	0.0	8	16	8	7	e.	Walter I. Tanner.
Clinton	East Feliciana	113	20	80.9	+ 0.7	95	28	69	18†	24	4.03	− 2.39	1.18	0.0	12	17	7	7	n.	John A. White, Jr.
Collinston	Morehouse	65	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Page.
Covington	St. Tammany	39	17	83.3	+ 1.8	98	2	70	18†	27	5.74	− 0.98	1.81	0.0	16	16	4	11	s.	Mrs. Lucille Champagne.
Dodson	Winn	.....	1	83.1	.....	102	3	67	27	30	4.37	.....	1.60	0.0	5	12	17	2	s.	J. P. Lucas.
Donaldsonville	Ascension	33	20	82.7	+ 1.2	95	24†	70	11†	24	4.75	− 1.05	1.04	0.0	15	23	3	5	e.	John F. Park.
Farmerville	Union	177	20	80.5	− 0.3	95	22	64	26	24*	2.78	− 0.60	1.79	0.0	7	9	17	5	s.	W. P. Chandler.
Ferriday	Concordia	.....	3	81.1	.....	96	21	80	14	28	1.29	.....	0.50	0.0	6	.....	.....	.....	.....	R. Z. Sclater.
Franklin	St. Mary	10	18	83.6	+ 1.3	98	9	72	13†	24	5.38	− 2.31	1.32	0.0	19	9	17	5	s.	Miss Josephine M. Bonney.
Grand Cane	De Soto	302	4	83.2	.....	101	3	63	12	30	0.50	.....	0.30	0.0	2	20	1	10	s.	Charles M. Huson.
Grand Coteau	St. Landry	93	23	83.2	+ 2.0	97	9	70	15†	25	2.23	− 2.53	1.78	0.0	6	19	10	2	se.	St. Charles College.
Hammond	Tangipahoa	44	15	82.8	+ 1.5	98	9	68	16†	29	3.03	− 3.48	0.90	0.0	9	18	13	0	se.	C. C. Carr.
Houma	Terrebonne	.....	19	81.9	+ 0.5	99	1	68	11†	25	4.91	− 1.62	2.00	0.0	9	3	9	19	ne.	Prof. H. M. Foote.
Jena	Catahoula	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. S. Harrell.
Jennings	Calcasieu	30	12	83.6	+ 1.6	98	31	70	7	25	2.34	− 2.59	0.88	0.0	9	4	24	3	se.	J. F. Buch.
Lafayette	Lafayette	36	21	82.4	+ 0.9	94	1	71	15	21	5.55	+0.25	1.32	0.0	10	13	11	7	e.	J. J. Davidson.
Lake Charles	Calcasieu	22	22	82.9	+ 1.5	100	2†	68	16†	30	10.63	+ 5.43	4.89	0.0	8	24	2	5	s.	A. O. Boudreaux.
Lakeside	Cameron	.....	9	83.6	+ 1.0	98	23	70	5†	22	6.59	.....	2.00	0.0	7	24	0	7	sw.	Miss L. T. Nunemacher.
Lawrence	Plaquemines	6	18	83.4	+ 0.4	97	8	70	11	26	2.49	− 4.63	1.34	0.0	3	21	9	1	s.	H. C. Warmoth.
Leesville	Vernon	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. M. McFarland.
Liberty Hill	Bienville	.....	23	86.8	+ 4.3	104	8	71	11†	30	4.71	+ 1.81	2.47	0.0	6	13	11	7	s.	Dr. E. A. Crawford.
Logansport	De Soto	192	6	.....	.....	.....	.....	.....	.....	.....	1.99	.....	1.30	0.0	6	12	6	13	s.	Mrs. Bettie M. Dennis.
Melville	St. Landry	45	21	82.2	+ 0.7	97	22†	67	30	29	1.61	− 3.91	0.70	0.0	7	16	9	6	ne.	Chas. B. McNeill.
Minden	Webster	194	18	81.4	− 0.7	102	3	61	11	31	7.01	+ 4.27	4.00	0.0	10	14	13	4	n.	Miss Ethel Fort.
Monroe	Ouachita	82	22	84.0	+ 1.9	102	22	66	27	33	3.68	− 0.06	2.02	0.0	6	24	2	5	e.	Kenneth F. Stiles.
Morgan City	St. Mary	14	5	.....	.....	.....	.....	.....	.....	.....	6.30	.....	1.36	0.0	18	8	15	8	se.	Virgil E. Kinsey.
Newellton	Tensas	.....	3	81.5	.....	95	21	67	26†	26	0.96	.....	0.84	0.0	2	15	16	0	.....	John D. Fultz.
New Iberia	Iberia	15	20	82.2	+ 0.9	93	4†	71	27	20	2.48	− 4.45	0.50	0.0	11	2	28	1	ne.	Mrs. Jno. A. Gebert.
New Orleans (1)	Orleans	51	40	83.4	+ 2.4	94	9	70	11	29	6.01	+ 0.40	2.66	0.0	11	16	14	1	s.	U. S. Weather Bureau.
New Orleans (2)	....do	18	21	83.8	+ 2.0	97	3'	70	16	26	4.85	− 1.01	1.60	0.0	10	6	12	13	s.	Sugar Exp. Station.
Opelousas	St. Landry	83	18	83.7	+ 1.9	98	21†	70	15†	28	3.84	− 1.65	1.68	0.0	10	26	4	1	w.	Andrew Moresi.
Paradis	St. Charles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Louisiana Meadows Co.
Plain Dealing	Bossier	268	18	83.0	+ 1.4	103	3	63	27	31	7.29	+ 4.62	2.11	0.0	9	12	13	6	se.	Leon Sanders.
Rayne	Acadia	44	18	83.2	+ 0.8	99	22	70	15†	25	4.05	− 1.23	1.00	0.0	10	19	3	9	e.	A. P. McNeil.
Reserve‖	St. John Baptist	.....	8	84.0	.....	103	2	69	5	30	8.36	.....	1.35	0.0	10	5	16	10	.....	Leon Godchaux Co., Ltd.
Robeline	Natchitoches	147	13	82.4	+ 1.2	100	2†	67	30†	30	4.15	+ 0.84	1.42	0.0	4	18	6	7	s.	Miss Ruby McCook.
Ruston	Lincoln	312	13	83.2	+ 1.3	105	23	68	30	36*	0.82	− 2.33	0.50	0.0	3	10	18	3	sw.	J. C. H. McKinney.
St. Francisville	West Feliciana	115	6	81.8	.....	95	3	69	18	22	6.19	.....	1.55	0.0	9	27	3	1	ne.	L. P. Kilbourne.
Schriever	Terrebonne	17	17	82.8	+ 0.7	96	3†	69	23†	26	9.95	+ 3.59	2.44	0.0	13	24	1	6	e.	Chas. V. Moore.
Shiridan	Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. A. Self.
Shreveport	Caddo	249	39	82.0	+ 0.6	99	2	65	27	23	3.19	+ 0.95	1.45	0.0	7	17	8	6	se.	U. S. Weather Bureau.
Simmesport	Avoyelles	.....	5	.....	.....	.....	.....	.....	.....	.....	2.51	.....	0.72	0.0	10	9	8	14	ne.	C. T. Leigh.
Southern Univ. Farm	Jefferson	.....	15	.....	.....	.....	.....	.....	.....	.....	4.66	− 0.17	1.35	0.0	10	8	20	3	se.	F. L. St. Martin.
Sugartown	Calcasieu	.....	17	83.0	+ 1.6	94	21†	72	15†	20	1.62	− 3.09	0.80	0.0	3	0	31	0	.....	G. W. Richardson.
Tallulah	Madison	91	2	82.0	.....	100	3	65	31	30[b]	1.95	.....	1.37	0.0	4	1	29	1	.....	C. E. Speed.
Walker	Livingston	.....	.....	82.2	.....	95	31	68	29	27	4.19	.....	2.11	0.0	9	.....	.....	.....	.....	H. C. Fondren.

[a], [c], [e], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
| Estimated by observer.
|| Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 7, Lower Mississippi Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blaine	Cimarron			T.		1.40						.87			.20		.13	T.	T.					.29								2.89
Buena Vista	Arkansas				.31					.10													T.	T.								0.41
Calhan	Big Sandy	.29				.37		.45		.10	T.		.37	.08	.40	.40			.03				T.			.11			.03			.16	2.79
Canyon City‖	Arkansas	.03	.24		.08	.05	.18	T.				.29	T.	.07	.01			T.	.09		.31	T.		T.	.03	T.		T.	T.				1.38
Colorado Springs	Fountain	.10			.16	.01		T.	.03	.07	T.		.13	.86	.02			.03	T.		.08	.02	T.	T.	T.			.01					1.52
Cripple Creek	Oil Creek																																
Cuchara Camps	Cucharas			.12		.02					T.	T.																					0.21
Eads	Big Sandy					2.25							.21																T.	.07			2.46
Fairview	St. Charles			.08	.47	.51			.08		.06		.02	.71						.11	.19		.09	.02						.14			2.48
Florence	Arkansas																																
Fremont	Fountain	.14	.11	.07	.14	.09	.05	.05	.04	.04	.05	.01	.35	1.02	.03		.01	.09	.21	.13	.30	T.	.17	.06	.12			.02	.01				3.31
Garfield	Little Arkansas	.18	.02		.30	.10		T.	.21	.01		.03	.20	.07		.03			.05	T.	.07	.02	.08	.08	.19			.01	.03	T.			1.68
Glen Eyrie	Fountain					.01							.04	.05							.02	.02											0.14
Hamps	Big Sandy	T.		.92	.05	.72		T.	.10	.05			.25					.02	.04						.04			.16					2.35
Hermit Lake	Grape Creek		.51		.55	.31					.27	.09								.23			.36	.34	.38				.14				3.18
Hoehne (near)	Purgatoire		1.25		.15	1.01				T.			T.	.20	.33			.14	.05									.07		.02			3.22
Holly	Arkansas			.42		.17		.09		.56				.03				.05						.28	.09					.11	.04		1.84
Lake Moraine	Fountain		.44		.24	.20		.18	.09	.05	.28		.08	1.44				T.		.84	.12	.09	.31		.20						T.		4.56
Lamar	Arkansas			.18	.10	.02		.09	.38																					.14			0.91
Las Animas	...do				.63			T.	.23	T.		T.		T.				T.							T.					.22			1.08
La Veta Pass	Cucharas																																
Leadville	Arkansas	.01	.08		.02	.40		.03				.08	.02	.01	.06	.04	.09	.02		T.	T.	.04	T.	.15	T.			.02	T.				1.07
Limon (near)	Big Sandy	.06	.23			.66			.08	.15						.20		T.											.33			1.71
Madrid	Purgatoire					.12			.06	.07				.08											.05				.26	.13	.03		0.80
Marshall Pass	Arkansas																																
North Lake	Purgatoire					.32				.52			.98								.12						.13			.32	.14		2.53
Pueblo	Arkansas	.37	T.	.53	.69	.04				.03	.04	T.		.64					.02	.03	.03			.01	T.			T.	T.	T.	T.		2.43
Rockyford (near)	...do																																
St. Elmo	Chalk Creek	.11			.40	.10		.05	.14				.20	.27	.05					.05			.10	.09	.10				.24		.04		1.94
Salida‖	Arkansas	.05				.52	.15			.12	.60		.10									T.		.25	.05				T.				1.85
Sheridan Lake	...do				.99	1.28											.24									.25			.24				3.00
Stonewall	Purgatoire		.09	T.		.39			T.	.17		.35		T.			T.	.05			.04	.03	.05	.06	T.					.07	.05	1.35
Trinidad	...do	T.			*	.30						T.			T.	.01	.02			.02	.03							.01	.03			0.42
Victor	Oil Creek	.25	.06		.28				.02	.13		T.			.50								T.		T.	.15			T.	T.			1.39
Vilas	Cimarron					1.47										.33	.40	.06											T.		.18		2.44
Westcliffe	Grape Creek		.10		.20	.05				.21	.03	T.		T.				T.	.32		.05		.06	.02	.04				.02	T.			1.10
Winfield	Clear Creek	.08	.04	T.	.51	.07	.03		T.	T.	T.	T.	.27		.11		.01		T.	.08	.02		.02	.14	.05			T.	.08	T.	.04		1.55
Wortman	Arkansas	T.	.02	T.		.10	T.		.10		T.	.05		T.	.13	T.	.20	T.	.30	T.	.30	.05	T.	.10	.10			T.	T.	T.	T.	T.	1.35
New Mexico.																																	
Abbott	Canadian		.08	.31	.50					.32			1.24	.50				.55										.13	.20	.25		4.08
Albert	...do			.64	.25	.21	.20						.08	.15				11	1.43						.06					.20	.30	3.63
Arch (near)	Red																																
Aurora	Canadian	.53	.06	.12	.37	.07	.04		.07	.03	.40	.02			.12		.16	.01	.03	.02	.04	.03							.08	.05	.12	.05	2.42
Bell Ranch	...do			.04	.33					.30			.04	.47					.58										.16		.06	.71	2.69
Black Lake	...do				.07				.05				.15		.07		.26	.23	.06			.20							.02	T.		.22	1.33
Cabeza	...do					.50	.35		.05		.15		.60		.90	.03		.20	.19							.15					.50	3.62
Campana	...do			T.	.45					.25		1.00	.38																				3.45
Chacon	...do																								.14				.67	.17	.18	.21	
Cimarron (near)	...do	T.	T.	.13	.15	.61			.30	.04	.02		.03	.59	T.		.18	.01					T.	T.					.04	.09	T.	.08	2.27
Clayton	...do			.61	.11	T.			T.	T.	.50				.04	.03	.11	.28	.05	T.			.02							.23			1.98
Clovis	Red																																
Cuervo	Canadian		T.	.09	.10	.28				.23		.07	.02		.50	.04			1.18										.05		T.	.60	3.16
Dawson	...do		.01	.13	.02	.23			T.	.60	.53			.60			1.66	.02				T.	.48	T.				.60	.42	T.	.80	6.10
Dorsey (near)	...do	.30	.30		.60	T.			.07	.35	.05	.15		.85	.97		.14	.20					.14	T.						T.	T.	4.12
Elizabethtown	...do		.28	.20	.18	1.02						.04	.20	T.	.32								.35		.22					.45	.12	3.38
Folsom	Cimarron		.13	T.		.38			.04	1.62		.54	T.		.04		.31	.22	.05				1.19	T.	.65			.08	.06	.05	.02	5.38
Fort Union	Canadian		T.	.25	1.98					T.	1.33	.14		.90	.25	T.	.10	.15							.10			.75		.10	.12	6.17
Hayden	...do				1.50				.32		*	4.26																		.49		6.57
Johnsons Park	...do	T.	T.	T.	.69	.21					.07	.15		T.	.21		.11	T.	T.				.20					.36		.12		2.12
Kappus	...do																																
Lake Alice	...do			.05	1.36	.04					.82	.10		.18	.08			.05					.10					.49	.12			3.39
Logan	...do		.25		.52	.80					.48		.43		.30				1.02												.58	4.38
Los Alamos	...do			.98	.76					.35	.06		.31		.77	.04			1.00								.15				.12	4.54
Lukins (near)	Red			.14	.30		.49				.40	.10		.14		.56		2.20												.60		4.93
Maxwell (near)	Canadian		.14	.80	.12	.17				.56				.83	.14		.03	.44									.56					3.79
Melrose	Red																																
Miami Ranch	Canadian	.16		.20	.55	.08					.04			1.41		.02		.45										.08		.13			3.12
Montoya	...do		.40	.30	.44	.12				.72		.44		5.50	.11		.08	.20	.52										.50		.50		9.83
Mount Dora	...do																																
Nara Visa	...do	.06		.70		T.	.02				.63		.12		.15		.06	.21	.63	.01						.15			T.	T.	.32		3.06
Optimo (near)	...do																																
Pasamonte	...do			.08	.15	.10				1.36				.35	.12			1.07											.45	.20	.75		4.63
Raton	...do	.04	.55	.22	.20	1.73						.15	.07	.02	1.34	.02	.12						.04	.09	.04			.30	.05				4.98
Rociada	...do					1.50		.30	.20	.10	.22		.23					.90													.18		3.72
Rosebud	...do																			.09													
Roy	...do	.70		.05	.40					T.	T.		.35		.55	.05		.12	.05									T.			.40	2.67
San Jon	...do	T.		.23	.30	.41					.42		.02		.24		.13	.14	1.77							.05				T.	T.	1.03	4.74
Solano (1)	...do	.04	.03	.05		.57			.05						.43		.12	.02	.09				.25			.03					.05	.41	2.14
Springer	...do				.50	.08				1.20		.10		1.10		1.10		.10				T.	T.	T.				.10	.15		.02		4.45
Taylor	...do	.10	.15	.05	.10	.30		.10		1.00			.05	.70									.05						.05	.05	.05		2.75
Trementina	...do	.50			.63					1.03			T.	.56				.13										.10	.02	.07	T.	.72	3.76
Tucumcari(1)	...do		T.	.09	.49	.55				2.75		.13		.55		.25	.02	*	.29						.12					.04			5.88
Valley	Cimarron	T.				1.80						T.		.80	.90		T.													.90			4.40
Vermejo Park	Canadian	.11	.09		.23	.42				T.	.48		.11		T.	.14			.29		.05	T.				T.	T.		.09		.25		2.26
Wagon Mound (near)	...do	.05		.02	.66	.22				.02	.03	.01			.62		.50		.03						.67				.51	.14	.20		3.08
Texas.																																	
Amarillo	Canadian			.67		.02	.18			.64	.18		T.			T.	.19	.01	T.						.26	.02						.02	2.19
Archer City	Red				.07	.08	T.			.13			T.		.79			.08															1.15
Arthur City‖	...do					.65				60	2.00	.20			.40	.20																	4.05
Bonham	...do				.07	.34				.72	.40								T.	.52													2.05
Canadian	Canadian																																
Childress	Red																																
Chillicothe	...do																																
Clarendon	...do	.30			.40	.15					.73								1.49													1.64	4.71
Clarksville	...do				.40	.15				.65	1.90	.15									T.												3.25
Claude	...do	.07		.17	.07					.50		.14					.14	.07															1.16
Dalhart‖	Canadian				.04		.70			.02	1.10							.90								.12						.12	3.00
Denison‖	Red	.06	T.			.08	1.00	.04		.04	.62	.76		T.	T.		T.			T.	.12												2.72
Finley‖	...do											.08	1.20							.20	.12	1.40											3.00
Henrietta‖	...do				.04	.25					.22					.03				.20													0.74
Hereford	...do			.75	.30	.93	.08			.08		.30				1.25										.15							3.86
Lewis Ferry‖	...do					.06					.20		3.00		.72	1.50				1.00	.04												6.52
Memphis	...do	.60		T.	.50	1.05				1.48	.80	.12							.65												.15			5.35
Miami	Canadian	.08			.04	.01	1.46				.64			.63					.05															2.91

TABLE 2.—*Daily precipitation for August, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
Mobeetie	Red						1.05																										1.05
Nazareth	do			.28	T.	.09	.05			.07	.08	.61			1.30		T.		.25							.04							2.77
Ochiltree	Canadian			.25		2.25							.40			.05			.75												.15	3.85
Pampa	do																																
Paris	Red	T.	T.			.11	.51			T.	.72	1.37	.04	T.	.01					.20	.23	T.				T.						3.09
Plemons	Canadian	.25			.34		1.51			.12	.25			.03					.15	.09						.12				.09		.18	3.13
Quanah	Red				.55	T.	.40			.30	.60	T.																					1.85
Ringo Crossing	do									.51	.24					.61											.87						2.23
Romero	Canadian	.02	.01	.02	.30		.19		.01		.46	.05			.09	.02	.24	T.	.08	T.						.17				T.	.02	.34	1.92
Sherman	Red																																
Sulphur Springs	do																																
Texline	Canadian				.30		.04				.50			.33				1.01	.08					T.			.12				.38	.11	2.87
Tulia	Red			.26	.46	.25	T.			.25	T.	1.99	.10			T.	T.	.40		T.							T.					.04	3.75
Winfield	do					T.				.11	.24	T.		T.						1.14	T.									T.			1.49
Kansas.																																	
Alden	Arkansas						3.60		.36																							1.56	5.52
Anthony	do		T.	T.		T.	.62			1.40	.13			.06	T.			.07	.38							.10							2.76
Ashland	Cimarron					.18	.74			.07	2.95	.01	.17					.25	.30	T.	T.	T.										.32	4.99
Burlington	Neosho	.42	.28	.02			.20			1.10								2.34												.65	.15	5.16
Chanute	do		.19			T.	1.19			1.62					.19			.56	.16													3.91
Cimarron	Cimarron			2.20			.65	T.			.05			1.27			T.	.36	.30					.40							.37	5.60
Coldwater	do			.01		.36	.21			.13	.15			.18			T.	.26	.31							T					.06	1.67
Columbus	Neosho	T.	.51			T.	1.78	T.	T.	1.40				.01	.01			.02								T.				.02		3.75
Coolidge	Arkansas			.20					.58				1.50				.20							.72					.20			3.40
Cottonwood Falls	Neosho		.26	.05			.30	.01		1.21								2.00	T.							T.				T.	1.35	5.18
Council Grove	do																																
Cunningham	Arkansas					T.	.25			.80	T.	T.				T.		T.	.10							T.				T.		.85	2.00
Dodge City	do		.21	.39		.35					.21		.26	.01			.06	.17	.42	T.			T.			.29				.02	.15	.06	2.63
El Dorado	do						.11			.90				.14	.01			1.30	.25							.04					1.33	4.08
Ellinwood	do			.18			3.12		1.02	.18		.07		.01		.04	.02	.33								.15					.02	.94	6.08
Emporia	Neosho	.36	.20	T.			.42	T.	.25	1.10						1.80	.10	1.68	T.					T.		T.				.07	1.18	7.16
Eureka	Verdegris	.04	.27	T.			.46	T.	T.	1.22				T.	.17			1.56	.33							.05				.12	.65	4.87
Fall River	do		.02				.80		T.	1.50				.02	.50			.45	1.10	T.												4.39
Fargo	Cimarron																																
Fredonia	Virdigris		.05				1.08	.27		2.00				T.				.94	.60														4.94
Garden City	Arkansas																																
Great Bend	do				.13		1.08	.20		.54		.05					.08	.12	.20							.08						.50	2.98
Greensburg	do			.09		T.	.26			.01				.19			.09	1.04	.27												1.37	3.32
Grenola	Verdigris	T.				T.	.80			1.75				.49	.04			.03	.64							.07					.24	4.06
Howard	do		.03			T.	.82			.88				.31				.25	.92												T.	3.21
Hugoton	Cimarron				2.77			T.						.94			T.	.72	.16										.32		T.	.19	5.10
Hutchinson	Arkansas		.01	.02		T.	1.38			.74						.03										.01				.01		1.30	3.50
Independence	Verdigris		.04			T.	.75		T.	1.40				.05				.12	.78														3.14
Iola	Neosho	.02	.24				.44		.48	.56				T.	.16		T.	1.22	.42					.01		T.						T.	3.55
Irene	Arkansas			.22		.44			T.				.81			T.		T.						T.		T.				T.	.20	T.	1.67
Jetmore	do			T.			.22			.10		T.		.40			.16	.30								.57					.45	2.20
Kingman	do		.03	T.	T.	T.	2.02			.62	T.			.03		.96		.06	.16											T.		.12	3.97
La Crosse	do	T.	T.				.59		1.40	.08				.13			.58	.25							.16					T.	.48	3.67
Lakin	do			T.		.33							.82			1.25								T.		.23				.10	T.		2.73
Larned	do		.07	T.			.38		.41	.42				.15		3.25	.34	.02							.02	.22					.81		6.09
Lebo	Neosho	1.30	.17	T.		.25		.21	.92					T.	.07	.02	.03	1.77	T.			T.		T.		T.	T.				T.	1.81	6.55
Le Roy	do																																
Liberal	Cimarron		T.			T.	2.27			.03	.11			1.27		T.	T.	1.39	T.				T.		T.	.16			.04		.37	5.62
Macksville	Arkansas	T.		.03			.20	T.	.68			T.					T.	.16		T.			T.	.14	.03				T.	1.03		2.29
McPherson	do		.03		.05		.44	1.08		1.02				1.03				.12													.52	4.29
Madison	Verdigris	T.	.52	.02			.24		T.	1.41					T.		T.	2.48	.04					T.		T.					T.	.81	5.52
Marion	Neosho	T.	.03	.40			.58	.01	T.	1.14				.02	2.03			2.14	.02						T.	.02				.03	T.	1.01	7.43
Medicine Lodge	Arkansas			T.		T.	.18		1.22		.26			.08			.05	1.24													T.		3.03
Medora	do		T.		.14	.81		1.64		1.24					T.			.10	.09							T.			.03		.01	1.20	5.26
Mount Hope	do		.03	T.		T.	.52		.30					.91		.18															1.21	3.15
Neosho Rapids	Neosho		.21				.03	.23	.16	1.50							.28	1.40	.48													1.30	5.59
Ness City	Arkansas	T.				.18			1.08				.30			.30	.22	.30								.15				.42	.23	.21	3.37
Newton	do			.36			.66			1.89				1.18	.17			.09	.26													.87	5.48
Norwich	do		T.		T.	T.	.85			1.40	T.		T.	T.	.05		.30	.10	.59						.04						1.01	4.34
Oswego	Neosho	.25	.14				1.56			1.65				T.				.60	.28														4.57
Plains	Cimarron						.70				.44								.02							.20							1.36
Pratt	Arkansas																																
Rome	do		1.03				.65			1.12				.44				.23	.23														3.70
Sedan	Verdigris		T.				.50	.24		1.00				T.	.84				.18	.56													3.38
Toronto	do		.33				.56		1.10						.52			1.10	1.52														5.13
Ulysses	Cimarron			.50		3.00							.35					1.50										.25		T.	.20	5.80
Walnut	Neosho		.26			T.	1.62	.10		1.40				T.	1.80			.94	.35														6.47
Wichita	Arkansas	.36	T.	T.		T.	.02		.49	.21				.65				.12	.07							.08					T.	2.52	4.52
Winfield	do						1.03			2.10			.25						.50							.05					T.		3.93
Yates Center	Verdigris	T.	.15	T.			.50			1.09					.09			1.75	.80							T.					T	.06	4.44
Oklahoma.																																	
Ada	Canadian																																
Alva	Arkansas																																
Apache	Red	T.			.61	.93	.06			T.	.08	.03		.05																			1.76
Arapaho	Washita	.06		.06	T.	T.	1.78				.42		T'	.46					1.21												.68		4.67
Ardmore	Red		T.			.45	.60				1.52	.20																					2.77
Bartlesville	Arkansas				1.17					1.01				.80				.10	.71														3.79
Beaver	Canadian	T.		.04			.80			.20	.14			1.60				40	2.65							.10						T.	5.93
Blackburn	Arkansas				.10	.30	1.60			1.20				.20	.05			1.34	.29														5.28
Cache	Red				.33	.85	.06			.27	.26	.10	.19																				2.06
Calvin	Canadian	.04			.35	.90	.93					.32		T.					.52	2.40	1.48												6.94
Chandler	do	.40			1.45	T.	.65			.23		.42		T.	.27				.65														4.07
Chattanooga	Red			1.20	.37				.15	.15	.20		.08				.18																2.33
Chickasha	Washita			.05		.50	.07			T.	.55																						1.17
Cloud Chief	do				.22	.10					.48			.38					.22												T.		1.40
Dacoma	Cimarron		T.	.90		.66	.77			.26	.79			.36				T.	.75														4.49
Durant	Red	.08				.12	1.02	.03			.41	.85																					3.36
Eldorado	do																																
El Reno	Canadian																																
Enid	Cimarron																																
Erick	Red			T.	.06		.15	.09		.40	.27	T.		.51				.14	1.90											T.			3.52
Fairland	Arkansas		T.			2.63				.71				.10				.43	2.52													.05	6.04
Fort Gibson	do	T.			1.08	.25	.24	.41		1.10	.11	.14		T.	.20	T.			.08	T.													3.62
Frederick	Red			T.	1.54	.10				.05	.54	.08	.05	.10																			2.46
Gage	Canadian				.20	T.	1.34			T.	T.			.62				.70	1.80							T.							4.66
Goodwell	do	.02									.16			.79		.06		.55	.25								.1	T.		T.		.08	2.07
Guthrie	Cimarron						1.05			.32	.30			.32				.85		.12													2.96
Guymon	Canadian																																
Harrington	Red																																

TABLE 2.—*Daily precipitation for August, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oklahoma—Cont'd.																																	
Hartshorne	Canadian				.65		.25			.20	.25	.30						.25	.15														2.05
Healdton	Red	T.			.11	1.07	.06			.29	.31	T.							T.													1.84
Helena	Cimarron	.08	T.		.93	.63	.84			.28	.35			.28					2.55													5.94
Hennessey	do			T.	3.20	2.55	1.17			.35	1.55			.27					1.70													10.79
Hobart	Red	T.		T.	.11	1.00	.02			T.	.60			.17					.41						T.					T.		2.31
Holdenville	Canadian						2.05	.02				32			.05					.05												2.49
Hooker	do	T.			.09		1.05			T.				.01		T.		.74							T.	.30				T.		.20	2.39
Hurley	do			.12		.26			.48	.21					.85	.76		.48					.74						T.	T.	T.	T.	3.90
Idabel	Red																																
Jefferson	Arkansas			T.		.30	.53			.85	.50		T.			.39		.05	.80												.03	3.45
Kenton	Cimarron		.7	.30	.03	.04					.94				.34	.06		.05	.17				.56			.12			.38	.06	.03	.01	3.16
Kingfisher	do				.87		1.32			.11	.28			.60					.37						T.							3.55
McAlester	Canadian				.28	.15	.09			.63	.19	.61		T.				T.		2.11												4.06
McComb	do			.37	T.	.64	T.			.15	T.							T.	1.25	.25												2.66
Mangum	Red				.60	.33	.27	.04		T.	.23	.06	.09	.15					.89													2.66
Marlow	Washita																																
Meeker	Canadian				.85	.55	1.50			.76	.46			.17					1.00													5.29
Muskogee	Arkansas																																
Mutual	Canadian						1.06				1.09			1.00					1.15													4.24
Neola	Washita	.08			.81	1.65	.09			.01	.36			.26					T.													3.26
Newkirk	Arkansas		.30				1.00			1.40				.12					.31											.12		3.25
Norman	Canadian																																
Oakwood	do	.01		.19	.85	.08	1.29				1.35			1.12					1.52						T.					T.		6.41
Okeene	Cimarron			T.	4.35	1.03	.94			.15	1.09			.50					1.14	T.					T.						.01	9.21
Oklahoma	Canadian	.01		.43	.01	.10	.07			.11	.41			.18					1.76													3.08
Okmulgee	do				.31	.48	.30			.25	.35		.42																			2.11
Pauls Valley	do																																
Pawhuska	Arkansas				T.	.01	.67			.90	T.			.73	1.44			.47	.08							T.							4.30
Perry	do				.39	1.71	1.45			.67	.25			.40					3.41	.01						T.							8.20
Ravia	Washita				.02	.93	.10			.10	.31									.35													1.81
Sac and Fox Agency	Canadian			.45	.98	.20				.98	1.00			.20					1.45													5.26
Shawnee	do	.10	T.		.80	.12	.68	T.		.06		.15		T.					.93	.57												3.41
Snyder	Red				.59	.23					.39	.08		.14																		1.43
Stillwater	Cimarron	T.			.15	.40	2.25			.50		.13		.75	.07				.72													4.97
Supply	Canadian																																
Tulsa (1)	Arkansas		T.	T.	T.		.80			1.60		.02		T.	.30	T.			.06	T.	T.									.70		3.48
Vinita	do		T.			T.	2.70			.80				.10	T.			.60	1.40													5.60
Wagoner	do				T.		.60			.64	.14			.39				.10	.06	.04													1.97
Waukomis	Cimarron		T.		.85	3.13	1.40			.25	.28			.19					1.55	.02						T.							7.67
Waurika	Red	.19			.48	3.84	.02			.19	.02			.01					T.	T.													4.75
Weatherford	Canadian	.02			.22	T.	.72			.03	.25	.54		.59					2.45													4.82
Webbers Falls	Arkansas	.22		.05	.02	.30	.80			.15	.30	.05	.77		.55																.02	3.23
Whiteagle	do					.46	.46			.95	.03			.02	.58			.11	.40	.01						.02				.01		3.05
Woodward	Canadian			.55	.45	.06	.85	.01			1.36	T.		.70				.13	3.54													7.65
Missouri.																																	
Belle	Meramec																																
Birchtree	Black							.35		.36									.42			.48				.47							2.08
Cape Girardeau	Mississippi																																
Caruthersville	do		T.	.15	.15		T.	.73		.12										.15				.75			.08						2.13
Dean	Neosho					2.14	T.			1.06					.36				1.95													5.51
Doniphan	Black		.15				.12			.18								.03	.12	.13			T.								.18	0.91
Farmingham	Mississippi																																
Gano	Meramec				.04		.17	.14		.51									.15			.44										1.45
Goodland	Black				.75					.38							10		.12			.41										1.76
Greenville	Mississippi				.84		T.	T.		.52				T.	T.								T.			.24	.10				.34	2.04
Hollister	White																																
Ironton	Mississippi			1.30	T.			.15			.40				1.00			.12		1.40			T.	T.			.20					4.57
Jackson	do			.31				.24		.26					.20				.04			.90	.83			.54						3.32
Joplin	Neosho	.10								.85				.30				.50	.40													2.15
Koshkonong	Black		T.	.28			.37	.29		.12					.04				.48	.08					.10	.53					T.	2.29
Lamar	Neosho			.14				1.41		1.26					1.54	.65			11	3.69												8.80
Marble Hill	Mississippi			.50		1.35																			.20							2.05
Mountaingrove	White		T.	T.			.38	.05	.18	1.60					.46				.45							T.						3.12
Mount Vernon	Neosho		T.				.81	.06	.04	1.11					.87				.41													3.30
Neosho	do	.01					1.69	.18		2.39					.09		.08		1.77													6.21
New Madrid	Mississippi			.30				.07	.40	.20										.10	.30			.10	1.20		.12					2.79
Oakfield	Meramec		T.	1.02			.07	1.28		.14								T.	.43												.69	3.03
Olden	White						.35	.17		.49					.15				.05													1.21
Perryville	Mississippi			.30				.34		.40									.40			.50										1.94
Rolla	Meramec		T.	.50			.15	.95		.51									1.52			.03									.14	3.80
Sikeston	Mississippi			.30	.25			.73		.53							T.	T.					T.	1.62		T.	.18					5.61
Springfield	White		.01				.53	T.	.29	1.54					1.01	.60		T.	.67						T.	T.							4.65
Steelville	Meramec		.97				.68		.71	.64				.25								T.								.39	T.	3.64
Kentucky.																																	
Blandville	Mississippi			.15				.20	.10														1.43	1.53		.03	.61					4.05
Lynnville	do			.14				.04		T.										.17				.35			T.				.04	0.74
Tennessee.																																	
Arlington	Mississippi				.78			.10	T.											T.					1.20							2.08
Bolivar	do				T.						T.									T.					.81							0.81
Brownsville	do				.20			T.	T.									T.	.45						1.85							2.88
Covington	do				.45			.14											.20						.90							1.69
Dyersburg	do				.62			.18	T.												.45				2.70		T.					3.95
Jackson	do																																
Kenton	do			.13				.10												.02				.83								1.08
Memphis	do			T.	.55			.15		.20		.04						.17	T.		.06	.09			T.							1.26
Milan	do				.04			.06	.55										T.	.11				.43								1.19
Trenton	do			T.				.18												1.14				.89								2.21
Union City	do			.28				.21												.12				1.22								1.83
Arkansas.																																	
Alicia	White							.95	.30								.70								1.60							3.55
Amity	Ouachita			T.				1.10		.45	.16	.90		.36	.12	.30	T.		.06	T.	.47	T.				.20						4.12
Arkadelphia (near)	do							T.		.52	.03	.22		T.		1.90		T.	.08		.79								.55			4.09
Arkansas City	Mississippi	.60				1.86				1.30		.14				.64																	4.54
Batesville (2)	White			.04	T.			1.66	.54	.04	.30								.08	.42	.06					.08	.12	.04		T.			3.38
Bee Branch	Arkansas			.45	.10		.10	.65		1.90		T.			1.50		T.	T.			T.				T.	.30					T.		5.00
Benton	Ouachita						.80			.54		.65			.33	.25	.54									.55							3.66
Bentonville	Arkansas		T.			T.	2.84			1.00		.05		.03	T.		T.																3.92
Bergman	White			.03			.48	1.15	.99	.24					.80				1.53	2.15													7.37
Black Rock	do			.37				.55	.12	.03	.42								.33	.20	.39					.02							2.43
Brinkley	do				T.	T.			T.		1.01		T.			T.			T.		.11					T.					T.		1.12
Calico Rock	do			.20				1.08			.30				T.	.20					.20	.20				.08	.20						2.46
Camden	Ouachita	.12				.18				.70		.20		.12	4.00	.02			.05		.22	.64				1.90	1.66						9.76
Centerpoint	Red			T.	T.			T.		.61	1.05	1.08		.30	1.60	T.			.05		T.				T.	T.							4.69
Clarendon	White	.05		.01		.05			.30		.25		.65			.50	T.		.05			T.				.05						.34	2.25

TABLE 2.—*Daily precipitation for August, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Arkansas—Cont'd.																																	
Conway	Arkansas			.01			.01	T.		.27					.40			.10			.30					1.44							2.53
Corning	White			.14	T.		T.	.17		.25						T.		T.	.85	1.37				.25	.03	.03	T.						3.09
Dardanelle‖	Arkansas				.86						.32				.08	.68					.06						.68						2.68
Dennard	White																																
Dodd City	do							1.05		.75					.60				3.60	.62													6.62
Dutton	do			T.	1.75		.55	2.24		.80	.20	T.		T.	.22		.12		1.27	.42					T.							T.	7.57
Earl	St. Francis																																
Eldorado‖	Ouachita	.08		T.		.23	.18				.33	.06	.05		.05	.35				.10	T.	T.	.05			T.							1.48
England‖	Arkansas			T.	T.	1.40	.08				.25	T.	1.10			.04						.20				.14	.15						3.36
Eureka Springs	White						.80	1.04		.43					.37			T.		.18												2.82
Fayetteville	do				.15		.58	.61		.50				.04							.14											2.07
Fort Smith	Arkansas			T.	.73		.21	.01	.85	.44	.03	.14		.32		1.15			.03												.05	3.91
Fulton‖	Red					.04					.30	.80	.80		.50	.60	.20					.20											3.44
Hardy	White		.02				.05	.50		.25		T.			T.			.03	.27	.25			T.		.04	.20						.18	1.79
Helena (2)‖	Mississippi				.04				.30		.32	.04	.40									.46											1.56
Hot Springs	Ouachita			.06				.14		.41	.48	.10		.10	.93	.20	.53				1.48				.01	1.07						.02	5.53
Huttig	do				.61	.19	.26			.83		.15			.08		1.24		.05		.23				.19								3.83
Jonesboro	White			.10				.64		.32							.20								.08	1.25							2.59
Junction	Ouachita				T.					T.	.15				.30					.25	.77		T.	.90	T.	T.						T.	2.37
Lake Farm	Arkansas				1.05			.51			.20	.61			.20						80				.44								3.81
Lewisville	Red				.55	.51				.20	.03	.58	.31	.20	.58	.23	.03		.20		.17	.03			1.05	.05							4.74
Little Rock	Arkansas				.04		.03	.05		.05	T.	.76		T.	.28		.51	.02	T.		.75				.01	1.32						T.	3.82
Lutherville	do			T.	.51	.10	.02	1.60		.52		T.				.11	T.		1.03	.20						.17							4.26
Malvern‖	Ouachita	.33			1.73			T.	.20		.40	.10	.26		.70	.20	.41	T.			40						.62	T.					5.35
Mammoth Spring	White			.36			.21	.23		.54					.03				.37							.47							2.21
Marked Tree‖	St. Francis						.62	.60																.42									1.64
Mena	Ouachita	.03		.01	.44	.02		T.		1.09	.18	1.28		.44	.32	.36	.19	1.04	.13		1.14					T.							6.67
Moosville	White																																
Mount Nebo	Arkansas																																
Newport (1)‖	White				24			.50	.70	.03	.12					.03		.08			.05					.95	.18						2.88
Ozark	Arkansas		T.				.07	1.35		.42	.08	.02		.08	.28				1.28	.82						2.00	T.						4.40
Pine Bluff‖	do	.45				.50					.04		2.90			.10			.05		.22	.78											7.04
Pocahontas	White			.06				.45		.15										.06	.70				.12								1.54
Pond	Arkansas		T.			T.	.80	.79				T.	.07	.10	.03																		1.79
Portland‖	Ouachita	.17				.95	.15			.18	.38		.18			.15				.05		.08			.35								2.64
Prescott‖	do								.08		.34	.14	1.13		.06	.33	.50			1.06	.05					.26							3.95
Rogers	Arkansas				.10	T.	1.10	1.58		.71		T.		T.				.02												.03			3.54
Springbank‖	Red				T.	.10					.10	.70	.90	.77	.26	2.21	.05			T.		T.			.40	1.31							6.80
Stuttgart	Arkansas																																
Subiaco	do			T.	.11		T.			.38	T.			.25	1.87	.02			.20	.42						T.					.06	3.31
Texarkana‖	Red					.54					.05	.30	1.85	2.00	1.12	.78	.10					.50											7.24
Warren‖	Ouachita	.22				2.43					.53		1.95			.07			.68		11	.29			.86	.05							7.19
Whitecliffs‖	Red	T.				.02			.02		.12	.06	.25	T.	1.25	1.65					.37	.23											3.97
Wiggs	Ouachita	T.		T.	T.			1.41		.71	.17	.10		.05	.72	.85	.39		.07	.31	.94				T.	.50	T.					.18	6.40
Wynne‖	St. Francis			T.	.13			T.	.33										.28	.01		.13					.02						0.90
Mississippi																																	
Anguilla	Yazoo				.28	.10				.45		.07			.22									T.									1.12
Austin	do			T.	.06		T.	.01	.49	.40		.32							T.	1.03													2.31
Batesville‖	do								.23		.10		.40								.30	1.60			.44								3.07
Big Creek	do																																
Byhalie	do				T.			.10	1.17	T.		T.							.53														3.38
Canton	Big Black					.08	.45	.01		.10		T.													1.48		.05					.05	1.29
Charleston	Yazoo				T.		T.	.11	.45	T.	1.64					.31	.21		.03					.07				.03		T.			4.86
Clarksdale‖	do	.08						.22	.15		.47		.84					T.		.85	1.10			.60	T.		T.			.11			3.81
Coffeeville	do			T.	T.		.06	.02		.19	.04									.41	.95				.69								2.48
Corinth‖	Mississippi				.01				.44		.02					.02				.04			.14				.33					T.	1.23
Crenshaw	Yazoo			.03	.17		1.36	.10	T.	.15		.37				.02				.22	.76			.03	.70							3.21
Denmark	do						.03	.14		.15	1.41									1.24	.05			.55									3.57
Duck Hill	do				T.	T.	2.10			.35	T.	T.									1.60			.28									4.33
Edwards	Big Black					.05	1.60	.70		T.		T.	T.			.08					.10			T.		T.		T.	T.				2.53
Enid	Yazoo							.05	.20	.45		.42		T.					1.12	1.23	T.			.88					.04				4.39
Fayette	Mississippi				.56	.20	T.			T.			T.		1.60		.10	T.		.45	T.			T.		.30	T.		.20				3.41
Greenville‖	Yazoo	2.39				.73	.15	T.			.57		T.		1.62										76								6.22
Greenwood‖	do	1.73				T.	T.	.04			.42		.02		T.	.90					10	.60			66								4.47
Grenada	do						3.00	T.		.40	.06								.86	.64			1.10										6.06
Hernando‖	do				.05				.23		.10		.08							1.20													1.66
Hickory Flat	do					T.		.14		.03		.03							.85	T.			1.06										2.61
Holly Springs‖	do				.10				.76		.35		.24					T.			.01	.02			.98		.18					2.64
Kosciusko‖	Big Black	.21				.45	.12	.91			.05											.20			.09			.17					2.20
Lake Coromrant	Yazoo			.05	1.20			.14	.13	.07		.03								.28	.01												1.91
Lula	do				.33		.19	T.		.28		.76				.25		T.			.15							T.					1.96
Malone	do				.06		.19		.05	.09	T.	1.17								.34	.05			1.05	T.				T.				3.00
Marks	do						.08	.05	.10	.23		.06								39	2.10	.03		.19							.03		3.26
Natchez‖	Mississippi	1.18				.13	.27		.08		.10	T.	.01	.06		.17			.24	.27	T.			T.	.03		.19	.70	.02	T.		T.	3.45
New Albany	Yazoo							.24	.26			.04							.23	T.				.86									1.63
Pontotoc	do						T.			T.		.06			.07				.94	T.		1.16											2.23
Port Gibson‖	Mississippi	T.				.25	.21	.18			.02			T.		.82			.36	.05		.11			.02		.06	.62		T.	T.	T.	2.70
Rosedale‖	Yazoo	.65						.02			.50		.02			.25																	1.44
Senatobia	do			T.	T.			.11	.13	.12	.01	1.19	T.						T.	.62			.13			.11							2.42
Shoccoe	Big Black				1.12	T.	1.72	T.		T.		.07					.25			T.		.35		T.									3.51
Suffolk	Mississippi				.52	1.84	.01	.01		.01			.21		.09	.03		.01	.08		.06			T.		T.	.07			T.	T.		2.94
Swan Lake‖	Yazoo	1.66							.28		T.					.15	.30																
Tchula	do				T.	1.30	.75		T.	.55		T.								T.				1.30									3.90
University	do							.21		.12		1.00								.12	.50			.31						.13			2.89
Utica	Mississippi				.47	.50	.12			.02					.08				.08		.64	.10		.05		.10	.90					T.	3.16
Vicksburg	do				.70		T.	T.		T.	T.	T.	T.		.32			T.	T.	.01	.25			.02		T.	.06		T.	T.			1.36
Water Valley	Yazoo				T.		T.	T.	.68	.18		.10								.75	.71			.81						T.			3.23
Woodville	Mississippi					T.	.08				.01		.61	.75	.03	.34	.06		.73			.53				T.	.35		1.15				4.64
Yazoo City‖	Yazoo	3.20				2.22		1.76			1.34		T.				T.																
Louisiana.																									.36		.04						8.92
Abbeville	Coast	.91				.38	.02	.15	T.			.68	T.		.40	.45	T.		T.			.10	.25			.48	.35		.01			.08	4.26
Alexandria‖	Red			.12								.59				.83				.61							.25						2.40
Amite‖	Coast					1.00		T.	.30			1.02	.03	.10	T.	.05			.50	.75	.20	1.05	.15		.45		.57	.60		T.	.05		6.82
Baton Rouge‖	do					T.	.28	.07	.08			.10								.04	.20			.05		.25	.49	.11					1.67
Burnside	do	.70			.06	.63	.13	.01	.07		1.11	.80	.17	.05	T.	.11	T.		.82	4.00		.25	.70		.40								10.01
Burrwood	do	1.50		.06	4.50					T.									1.94	.08	.02	.80				.10	.77					.66	10.43
Cades	do	.70	.04					T.				T.			2.10	.16	T.		T.	.17	T.		.55				.30	T.				T.	4.02
Calhoun	Ouachita				1.71	.15				.64								T.	.04			T.		.20	.04							2.78
Cameron	Coast											T.			.45		1.84					.70								T.	T.	T.	2.99
Cheneyville‖	Red		.60	.50				60				45				1.70			.15	.07							20						4.27
Clinton‖	Coast	T.				.13	T.	.03		.24		.70		.54		.96			1.12	.06			.09			.01	.05		.10	T.			4.03
Collinston‖	Ouachita																																
Covington‖	Coast						.47		.26	.02	.33	.07	1.81	.36	.08	.03	.01	.03		.32	T.	1.40		T.				.29	.18		.08			5.74
Dodson	Red					T.					1.60		.41					1.37	.04						.95									4.37

TABLE 2.—*Daily precipitation for August, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Louisiana—Cont'd.																																	
Donaldsonville	Coast		.20			.05	.32		.20			.65	.05	1.04	.10		.05	T.	.24	.10	.65	T.		.10			.75	.25	T.				4.75
Farmerville	Ouachita					.30						1.79			.05			.05	.20			.07			.32							2.78
Ferriday	do				.30		.16			.50			.10		.10													.13				1.29
Franklin	Coast		.02		.73	1.32	.01	.11	.03	T.	.52		.18		.08	.20	.11	T.	.11	.57	.94	.03		.08			.18	.05	.02	T.			5.29
Grand Cane	Red											.20			.30																	0.50
Grand Coteau	Coast	.15					T.	.03			T.	.03	T.		1.78		T.		.02								.22	T.					2.23
Hammond	do			.48	.48	T.	T.				.30	.25	T.					.12	.10			.90				T.	.29		.11				3.03
Houma	do	2.00		.70	.30		.01	.20			.40		.60						.20							.50							4.91
Jena	Red																																
Jennings	Coast		.06				.62	.09								.88	.05	.11			.03					.28			.22				2.34
Lafayette	do		1.00			.02		.11	.17					T.	T.	1.32	.73	.16		1.10	.50							.44					5.55
Lake Charles	do						2.18		.16				2.11		4.21	.68		.93								.18			.18				10.63
Lakeside	do	.39				1.65						.15		2.00	1.50		.60										.30						6.59
Lawrence	do					.99																					1.34	.16					2.49
Leesville	Sabine																																
Liberty Hill	Red	.25			.10						.55	.14	1.20		2.47																		4.71
Logansport	Sabine					.10	.12					.25	1.05							.15							.32						1.99
Melville	Red		.18			.26	T.	.15	.05			.70				.23	T.			T.						T.	T.	T.		.04			1.61
Minden	do	T.	T.	T.	T.	T.	T.					1.57	.22	4.00	.04		.02			.50	.04					.37	.20				.05		7.01
Monroe	Ouachita					2.02					.30	.14		.58						.56					.08							3.68
Morgan City	Coast				.17	.15	.22		.44	.02	.07	.87			.27	1.36	.67	.38		.15	.07	.63		.22			.15	.28	.18				6.30
Newellton	Mississippi				.84					T.		T.	.12						T.		T.											0.96
New Iberia	Coast	.10			.10	.50	.10	.10				T.			.45	.35			.05	.20	.18	T.				T.	T.	.35	T.				2.48
New Orleans (1)	do	T.			T.	1.88		T.	.04	T.	.30	.68		T.				T.		.04	.13	.05	.13		.26	2.41	.09					6.01
New Orleans (2)	do				.04	1.60			.58		.32								.07	.03		.34	.05			1.04	.78					4.85
New Orleans (3)	do					.86		.55			.20									2.70	.10											4.67
New Orleans (4)	do				.02	1.65		.01	.53		.27	.01							.05	.03		.34	.04		.16	1.48	.11					4.70
New Orleans (5)	do				.01	1.87		.06	.04		.80	.02						.02	.11				.12		.21	1.23	.15					4.64
New Orleans (6)	do					1.73			.15		.92									.24			.16		.35	2.13	.11					5.79
New Orleans (7)	do					1.37		.75			.31				.09						.74	.04				3.29	.10					6.69
New Orleans (8)	do				.05				.02		1.10	.33									.05				.32	1.86	.08					3.81
Opelousas	do		.19				.07	.34	.08			T.	T.			1.68	.70	T.	.18	T.	.03								.31		.26		3.84
Paradis	do																																
Plain Dealing	Red				.27					.29	2.11	1.36	2.03	.47	.41	.13										.22							7.29
Rayne	Coast		.10			.40		.35	.30							1.00	.20			.20	T.	.70						.50	.10				4.05
Reserve	do					1.35	.21			1.09		1.04		.96	.20						.54		.42				1.23	1.32					8.36
Robeline	Red						1.25					1.42	T.							.75					.73								4.15
Ruston	Ouachita	T.	.50							.10		.22						T.															0.82
St. Francisville	Mississippi					.37	.65		1.13				T.		1.55				.43	.35			.33						.43	.95			6.19
Schriever	Coast		1.37			.80			.19	T.	T.	1.58		T.	.18		.73	.24		.39	.06		1.15	1.29		T.	.77	1.20		T.			9.95
Sheridan	Pearl																																
Shreveport	Red	T.			T.	T.					.79	.75	.68	.36	.21	.06			T.							.34							3.19
Simmesport	do		.43			T.		.49						.72		.19	.12			.08	.10					.02		.34		.02			2.51
Southern Univ Farm	Coast					.80		.10			.72			.05	.02	.02		1.35		.05						.90	.65						4.66
Sugartown	do	.60					.22						.80																				1.62
Tallulah	Mississippi				1.37		.32								.10							.16											1.59
Walker	Coast						.32	.25	.23		2.11	.14	.61					.16								.27	.10						4.16

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.				New Mexico.				Texas.				Kansas.								Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.‡‡		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.‡‡		Bartlesville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	100	63	84	52	97	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
2	101	63	86	52	98	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
3	96	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
4	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
5	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
6	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
7	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
8	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
9	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
10	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
11	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
12	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
13	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
14	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
15	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
16	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
17	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
18	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
19	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
20	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
21	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
22	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
23	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
24	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
25	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
26	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
27	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
28	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
29	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
30	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
31	94	63	82	52	94	58	96	64	96	64	96	62	96	68	96	66	96	66	96	66	96	66	96	66	96	66	96	66
Mns	95.1	60.6	69.1	39.6	85.3	57.1	90.3	61.6	82.0	52.4	88.7	63.8	94.4	71.7	87.2	63.6	89.3	63.8	88.1	65.7	91.1	62.0	88.0	66.8	94.8	71.2	93.2	67.3

Date.	Oklahoma.																											
	Enid.‡‡		McAlester.		Mangum.‡‡		Muskogee.		Oklahoma.		Weatherford.‡‡		Woodward.		Missouri.										Lynnville. Ky.		Jackson, Tenn.	
															Caruthersville.		Ironton.‡‡		Lamar.‡‡		Olden.		Springfield.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	100	72	100	72	101	73	95	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
2	101	72	101	72	101	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
3	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
4	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
5	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
6	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
7	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
8	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
9	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
10	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
11	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
12	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
13	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
14	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
15	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
16	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
17	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
18	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
19	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
20	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
21	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
22	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
23	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
24	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
25	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
26	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
27	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
28	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
29	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
30	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
31	96	72	96	72	96	73	96	74	98	74	98	72	100	71	96	72	96	72	96	72	96	72	96	72	96	72	96	72
Mns	96.7	72.0	95.2	68.0	91.5	70.2	92.9	67.7	89.8	65.9	90.0	66.1	87.3	60.5	87.6	66.0	86.2	63.2	82.8	66.1	90.1	63.0						

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 7*—Continued.

Date.	Tennessee.				Arkansas.																Mississippi.					
	Memphis.		Union City.		Bentonville.		Corning.		Dardanelle.‡‡		El Dorado.‡‡		Fort Smith.		Little Rock.		Pine Bluff.‡‡		Texarkana.‡‡		Wynne.‡‡		Clarksdale.‡‡		Corinth.‡‡		Greenville.‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	87	67	92	62	88	67	87	62	86	70	91	70	90	75	86	71	90	70	90	73	89	65	89	67	90	61	91	70
2...	90	68	92	61	90	70	88	61	90	71	96	74	95	75	89	71	92	67	100	76	89	62	92	63	90	60	92	65
3...	90	75	89	67	94	75	90	69	94	72	97	75	104	80	92	75	95	72	100	77	93	70	95	69	90	68	95	67
4...	87	70	91	72	87	68	87	72	87	70	90	76	87	73	88	73	95	75	89	79	87	71	92	76	90	72	95	72
5...	86	70	91	62	86	63	86	61	86	67	90	69	85	72	88	72	90	70	90	72	90	63	92	72	92	66	91	72
6...	88	70	91	60	83	69	85	63	85	79	91	72	83	72	85	72	95	71	94	72	91	70	90	71	93	64	92	72
7...	88	74	91	70	80	66	88	69	94	71	93	73	88	74	91	76	94	74	96	74	94	72	92	74	92	70	93	73
8...	86	68	89	62	91	64	86	60	91	70	95	75	93	72	88	70	96	71	98	76	88	66	93	69	86	70	95	73
9...	84	70	88	65	82	63	83	60	85	67	89	75	84	65	82	70	85	74	90	76	85	68	91	72	90	67	95	76
10...	85	71	95	64	81	65	86	64	87	67	92	68	85	71	86	70	90	68	90	69	90	68	88	69	90	69	91	72
11...	87	69	91	59	87	66	87	63	84	68	81	70	84	71	80	70	80	71	80	70	89	70	88	71	91	69	87	72
12...	84	69	92	59	84	66	85	60	86	69	90	71	86	71	85	68	90	65	84	69	88	65	89	70	90	70	90	72
13...	87	67	95	59	83	65	88	60	88	67	90	71	80	70	86	70	86	67	77	72	90	61	91	65	91	64	93	68
14...	88	73	94	64	83	70	86	63	83	67	84	73	86	71	78	72	88	68	82	72	88	67	90	65	92	66	90	69
15...	87	73	95	66	87	69	89	68	88	70	87	71	85	69	85	69	86	69	87	72	89	68	89	71	94	64	90	71
16...	90	74	98	69	91	71	92	69	93	71	93	73	94	74	88	73	94	71	91	73	93	72	93	71	94	67	94	70
17...	90	74	100	68	90	71	92	70	91	70	94	73	94	73	91	72	90	72	92	74	93	69	94	72	98	69	94	72
18...	94	75	100	70	82	72	93	69	88	71	96	72	89	73	91	74	95	74	92	75	95	70	97	72	96	72	96	74
19...	86	72	91	73	86	71	85	71	86	71	94	72	88	73	86	74	95	73	92	75	87	71	95	72	88	72	94	72
20...	86	74	96	68	89	69	90	69	88	72	94	73	93	74	83	72	86	72	92	73	91	71	91	70	94	69	90	73
21...	88	70	95	68	92	70	91	70	93	70	94	71	95	73	90	71	90	70	94	72	92	69	92	69	93	69	93	69
22...	92	74	97	71	96	73	94	74	98	72	96	74	99	76	94	76	97	74	95	74	96	74	95	71	92	69	96	73
23...	84	72	87	67	97	76	91	75	99	73	96	76	103	78	93	76	98	76	95	75	92	76	93	75	81	72	96	72
24...	88	71	90	72	94	76	85	72	88	75	96	71	96	77	88	72	95	70	94	75	88	71	89	70	90	68	92	69
25...	85	71	89	70	83	55	88	71	93	71	79	72	87	70	88	67	90	70	93	75	90	68	84	69	90	70	89	69
26...	76	64	82	62	74	53	75	61	73	66	88	62	80	65	71	65	77	66	78	70	75	65	79	68	80	67	81	71
27...	78	60	84	55	78	50	78	59	81	57	88	65	81	59	79	61	86	62	81	64	82	57	85	63	86	60	88	64
28...	90	64	97	56	88	58	88	54	89	57	94	65	90	65	87	66	93	62	91	64	91	50	92	65	94	63	92	66
29...	92	71	100	64	90	60	92	63	93	67	96	72	95	73	92	72	96	68	93	73	95	67	94	70	96	68	95	71
30...	93	74	99	65	92	69	92	63	95	67	95	69	95	72	92	71	98	71	94	72	95	65	96	70	94	70	94	70
31...	90	72	98	65	89	67	92	67	96	66	94	69	96	70	93	73	96	73	94	72	94	64	93	70	93	72	94	71
Mns	87.3	70.6	92.9	65.0	87.0	67.0	87.7	65.8	89.0	68.7	91.7	71.4	90.0	71.8	86.0	71.1	91.2	70.2	90.7	72.7	90.0	67.5	91.1	69.7	91.0	67.6	92.2	70.7

Date.	Mississippi.						Louisiana.																			
	Kosciusko.‡‡		Natchez.‡‡		Vicksburg.		Alexandria.‡‡		Baton Rouge.‡‡		Covington.‡‡		Lafayette.‡‡		Lake Charles.‡‡		Monroe.‡‡		New Orleans.		Robeline.‡‡		Schriever.‡‡		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	86	70	92	73	91	72	97	72	95	77	94	75	94	77	99	72	101	74	91	78	98	72	90	73	92	73
2.....	88	63	96	73	92	73	96	72	96	74	98	74	93	75	100	74	100	75	93	76	100	72	94	71	99	76
3.....	92	67	98	72	94	72	98	71	94	75	97	74	93	76	98	75	99	75	94	77	99	72	96	75	98	77
4.....	94	69	95	76	89	70	97	83	90	76	94	76	92	76	99	72	92	76	86	74	98	73	89	75	86	74
5.....	88	71	90	70	88	70	94	71	93	76	94	72	87	73	82	72	90	70	90	73	91	70	89	72	89	70
6.....	86	70	91	72	88	72	95	71	91	73	92	75	90	74	92	69	93	70	91	75	94	71	94	71	92	73
7.....	88	71	93	73	90	74	96	71	92	74	92	72	88	75	96	69	93	74	89	75	95	72	95	70	95	75
8.....	93	72	96	76	92	76	98	72	95	77	96	73	92	76	97	70	98	75	92	76	97	74	95	72	96	76
9.....	92	73	97	77	91	73	100	74	96	75	95	74	93	75	98	72	92	76	94	77	96	74	96	74	92	75
10.....	87	68	95	72	89	70	94	71	93	74	97	73	93	76	96	73	95	71	91	73	90	72	95	75	92	71
11.....	89	71	95	72	86	74	92	70	94	72	93	71	91	73	92	70	89	71	90	70	90	68	95	70	79	70
12.....	88	70	91	75	89	73	85	70	93	73	94	73	91	74	95	69	92	72	90	77	88	68	94	74	94	70
13.....	90	68	95	72	93	73	95	69	96	74	94	73	92	72	98	69	92	73	91	76	87	69	94	74	77	74
14.....	89	67	95	72	91	72	95	70	95	73	92	74	91	75	95	72	88	74	91	78	91	70	95	70	84	73
15.....	90	68	95	72	90	73	95	71	94	75	92	74	88	71	93	70	92	71	92	77	92	71	95	72	88	72
16.....	93	68	96	71	91	72	94	71	95	70	96	71	88	73	96	68	96	72	92	76	91	70	95	71	92	74
17.....	93	69	95	73	91	74	94	70	92	71	95	71	90	73	95	69	97	74	91	77	96	72	95	71	92	75
18.....	92	70	96	70	95	73	93	70	90	72	94	70	91	73	96	68	96	75	91	78	95	70	94	71	93	74
19.....	93	70	97	70	92	72	95	69	88	70	91	72	88	72	97	70	92	72	89	77	94	69	94	70	91	71
20.....	91	71	96	73	91	72	97	69	91	69	94	72	89	73	95	70	97	73	90	78	97	69	94	71	94	75
21.....	91	68	98	72	93	70	98	72	93	73	96	73	91	74	97	69	96	72	92	77	98	71	95	70	94	75
22.....	93	70	99	73	95	73	97	74	95	71	95	72	93	75	99	70	102	72	91	77	99	70	96	71	95	77
23.....	92	72	97	73	94	75	98	73	94	72	95	72	93	74	100	70	97	76	92	78	100	73	95	69	96	76
24.....	88	68	95	75	92	73	95	74	96	74	92	73	91	76	96	70	99	72	88	76	94	68	92	72	96	73
25.....	86	69	91	71	88	71	92	70	92	73	88	73	90	73	95	68	95	71	83	73	94	72	92	72	92	71
26.....	89	68	89	72	87	71	90	70	85	71	86	73	85	73	91	68	91	72	85	75	87	71	85	73	80	71
27.....	91	65	91	70	89	67	94	69	94	70	95	71	90	72	94	70	96	66	91	76	89	68	93	74	87	65
28.....	94	67	99	71	94	73	97	70	96	70	94	72	92	73	95	70	101	68	93	77	95	69	95	71	92	71
29.....	93	69	99	72	94	74	97	71	93	72	95	71	92	74	95	68	100	68	91	78	97	70	93	73	93	74
30.....	94	68	97	71	93	73	97	69	95	73	97	70	93	72	96	70	101	74	92	78	95	67	94	69	93	73
31.....	92	67	98	71	95	74	97	69	95	75	96	71	92	74	97	70	101	74	90	79	97	67	95	72	94	73
Means.....	90.5	68.9	95.1	72.4	91.2	72.4	95.2	70.9	93.3	73.0	94.0	72.6	90.8	73.9	95.6	70.2	95.6	72.5	90.5	76.2	94.3	70.5	93.6	71.9	90.9	73.1

Climatological Data for August, 1910.

DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

BERNARD BUNNEMEYER, District Editor.

GENERAL SUMMARY.

The month of August was marked by persistently warm weather and decidedly deficient precipitation in the greater portion of the district. Conditions in Texas were very unfavorable on account of the dry and hot weather, and in some sections water for domestic and stock purposes gave out entirely and had to be transported by wagon and otherwise from other points. Only a comparatively small part of the State, comprising the lower coast counties and a few northern and northwestern counties, received more than the average amount of moisture. Heavy rains occurred in many localities in New Mexico, although the average precipitation for the month was a fraction of an inch below the normal in that territory. Some of these rains caused considerable damage by washouts and interruption to traffic. The rainfall was not well distributed, being of the usual summer thunderstorm type, with widely differing amounts in even near-by localities.

The greatest monthly precipitation in Colorado was 3.70 inches at Platoro; in New Mexico, 7.31 inches at Cloudcroft; and in Texas, 7.26 inches at Brownsville. There was no rain at 8 stations in Texas, and at 18 others in the same State the monthly amounts were less than 0.10 inch. The least monthly amount in Colorado was 0.84 inch at Saguache; and in New Mexico, 0.31 inch near Los Lunas. Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred as follows: Knowles, 2.77; Liston, 3.00; Pastura, 2.86; Abilene, 2.58; Brownsville 5.72; and Gatesville, 3.65.

The sunshine was abundant in Texas, but it averaged less than normal in the remaining portions of the district. The number of days with 0.01 inch or more of precipitation averaged 12 in Colorado, 10 in New Mexico, and 3 in Texas.

TEMPERATURE.

The monthly mean temperature was 0.8° above normal in Colorado; 1.9° above in New Mexico; and 2.8° above in Texas, the excess of temperature being greatest in the middle portions of the district. There was very little cool weather, and practically no relief in much of the greater portion of Texas from the protracted heated term. A few cool spells occurred in the upper half of the district, but they were mild and of short duration. The warmest weather in most sections occurred on the 2d, and the coolest on the 26th. The daily range of temperature averaged about 8° on the upper Texas coast and about 36° in the extreme northwestern portion of the district.

The highest and lowest temperatures reported were: In Colorado, 90° at Saguache on the 3d, 8th, 22d, and 27th, and 28° at Hermit on the 26th; in New Mexico, 108° at Carlsbad on the 2d, and 34° at Truchas on the 13th; and in Texas, 114° at Haskell on the 2d, and 50° at Plainview on the 26th. The local monthly means ranged from 60.9° to 64.8° in Colorado; from 55.5° to 83.2° in New Mexico; and from 77.6° to 93.1° in Texas.

PRECIPITATION.

Good rains occurred over the Rio Grande watershed in numerous localities north of El Paso, and heavy rains occurred over the extreme lower valley, but over much of the greater portion of the watershed the precipitation was deficient. The rainfall was least over a long stretch between El Paso and Eagle Pass, Tex. The average for the entire watershed was 2.14 inches or nearly 1.00 inch more than for the preceding month. The Rio Pecos watershed received much more moisture, the average being 3.03 inches. This is over 1.50 inch more than the July rainfall. The precipitation was heaviest over the upper reaches, where from 5.00 to 7.00 inches occurred in several localities, and least over the lower portion, which received considerably less than 1.00 inch.

The other watersheds of the district showed a decided deficiency of precipitation, the shortage ranging from 0.97 inch for the Trinity and Neches to 2.26 inches for the San Antonio. A few localities only, in the upper Brazos and upper Trinity watersheds, received slightly more than the normal. The following are the average monthly amounts in inches for the various watersheds: Nueces, 0.69; San Antonio, 0.38; Guadalupe, 0.45; Lavaca, 0.55; Colorado, 0.58; Brazos, 1.11; Trinity, 0.91; Neches, 1.19; Sabine, 1.74; and coastal plains, 1.64. These amounts are much less than those reported for the preceding month, except in case of the Sabine watershed which showed a considerable gain, and of the Brazos which averaged about the same.

RIVER CONDITIONS.

The rains in Colorado and New Mexico caused a largely increased flow in the upper portions of the Rio Grande, but the lower portion continued abnormally low during the month, although it furnished sufficient water for irrigation and stock purposes. The lower Rio Grande began to rise toward the close of the month. There was a decided increase in the volume of water discharged by the Rio Pecos, and all irrigation projects on both the Rio Pecos and Rio Grande received ample supplies of water, a marked improvement over conditions of the preceding month.

Unusually low stages obtained in all the other rivers of the district. Their flow was smaller than during July and is the smallest on record for August.

MISCELLANEOUS.

Meteor.—An unusually brilliant meteor was observed in many localities in eastern and southeastern Texas at 7:30 p. m. of the 19th. Mr. T. A. King, cooperative observer of this service at Lufkin, Tex., furnished the following description:

> The largest meteor ever seen here passed over this city on the 19th about 7:30 p. m. When first seen it appeared to be about 2 inches in diameter, and as it approached the city it grew in size and brightness until it was dazzling to the eye. It came from the north and plunged southward, lighting up the entire heavens like a short vivid flash of lightning. When near the horizon it exploded without any noise. When it exploded it appeared to be about 2 feet in diameter, showing the different colors of the rainbow, followed by a dense white cloud, which lasted for 20 minutes before dissolving.

According to press dispatches from Liberty, Tex., which is about 100 miles south of Lufkin, the meteor was moving slightly west of north and bursting with a vivid flash. At Livingston, Tex., about midway between Lufkin and Liberty, the meteor was seen to shoot downward across the eastern sky and burst some distance from the earth. In about 5 minutes a loud rumbling noise like thunder was heard which lasted about 60 or 70 seconds.

Drainage districts.—Drainage District No. 1 was established in Cameron County, Tex., by the commissioners' court of that county on the 18th. The area to be drained comprises 81,000 acres, and the cost of drainage will be covered by a bond issue of $204,600.

Irrigation projects.—At Corpus Christi, Tex., a water and irrigation company has been formed for the purpose of constructing a reservoir and storing the flood waters of the Nueces River for irrigating and domestic uses.

The Camfield Development Company will begin the construction of a large irrigation plant just north of Las Vegas, N. Mex., for the purpose of irrigating 17,000 acres of land.

An irrigation project, which has been approved by the territorial engineer, is contemplated in Santa Fe County, N. Mex. It is proposed to dam the Armijo arroyo and a tributary arroyo for the purpose of storing sufficient water to irrigate 13,000 acres.

CONSERVATION OF WATER IN THE LOWER TRINITY RIVER.

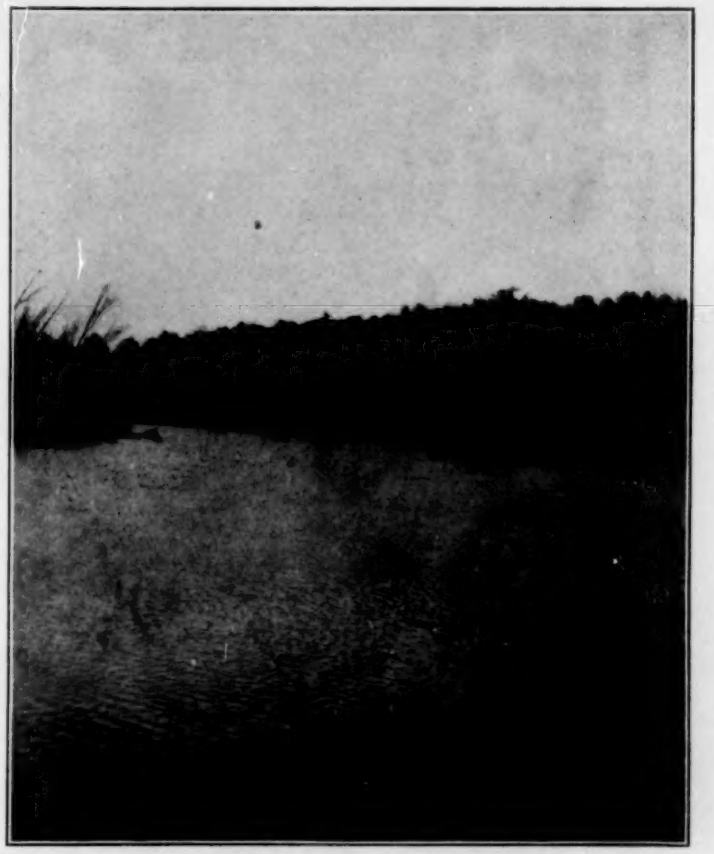
By H. P. PORTER, C. E., of the firm of Schlafli and Porter.

I have just completed the work of building the canal and irrigation plant of the Moores Bluff Rice Company on the lower Trinity River and was impressed with opportunities that this river would afford under a proper conservation of its waters. The stream is very favorably located, being bounded by vast areas of high fertile land, which should be one of the most productive and well improved sections of the State of Texas, but which it seems has been overlooked until now in the rush for opportunities in other fields. At this time, however, new life and activity are beginning to work and as a result new canals and improvements are already under way or contemplated.

The Trinity River is a navigable stream during ordinary stages and will permit large barges and medium draft boats to go well up into Liberty County. There is a great depth of water, probably from 20 to 35 feet most of the way, but from the fact that there are many snags and logs in the river, it is not safe to run boats except at slow speed. The U. S. Engineer Department has done considerable work removing the snags and clearing the channel, but no work tending to convert the river into a ship channel has been undertaken. The mouth of the river as well as a portion of Galveston Bay, into which it empties, is quite shallow. The water of the river spreads out into the several channels of its delta, and some of it supplies Turtle Bay and keeps it fresh most of the time. This condition has been taken advantage of by several irrigating companies growing rice in Chambers County. These companies have applied for permission and, I understand, have succeeded in having a bill passed permitting them to build a bulkhead with check gates across the narrow pass between Galveston and Turtle bays. This would conserve an abundant supply of fresh water in a way that would benefit not only the canal companies but also the entire eastern portion of Chambers County and part of Jefferson County. There are now thousands of acres of fertile land lying idle in that section which could be brought into cultivation. At present only a very small per cent of the water discharged by the Trinity River is used for irrigation, because most of the water reaches the bay before it can be diverted for rice irrigation. This is mainly due to the fact that the river is not easily accessible for pumping plants and canals above its mouth, because the elevation of the land becomes so great that it would prove an expensive investment to put in machinery for lifting the water. The plan of the Government to build locks in the river in order to make it navigable would, if carried out, conserve the water and raise it sufficiently for the installation of irrigating plants for rice culture farther up the river than now. There is at this time only one canal, the Moores Bluff Rice Company's canal which takes its water directly from the river. This canal is located at which is claimed to be the only available site where water can be secured at a moderate cost for construction and pumped upon the land with the use of only one plant. The water is lifted from 45 to 55 feet according to the stage of the river. A lock below this point would not only make the river navigable for a considerable distance farther up, but would conserve a large body of water by spreading it out over the low river bottom land which now overflows so often that it is not available for cultivation. It would also make available many pumping plant sites on each side of the river so that the water could be pumped on to the lands at moderate expense. In this way a large area of high prairie land now lying idle could be brought under cultivation for rice.

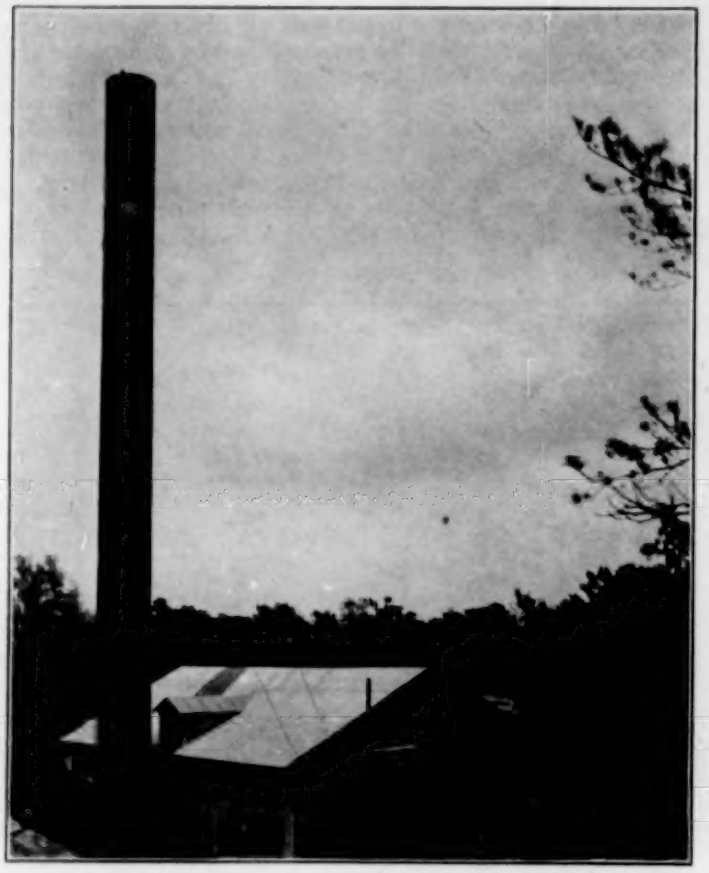
I understand a large amount of money has been expended by the Government on the upper Trinity River in the vicinity of Dallas for the purpose of making it navigable, but the lower end is still in poor condition so far as navigation is concerned. However, it is not the object of this communication to discuss what is being done on the upper Trinity River so much as to bring to notice what could be accomplished by conserving and utilizing the water of the lower Trinity and incidentally improving its navigability. So far as this latter phase is concerned, such representative cities as Beaumont, Galveston, Port Arthur, and Houston offer accessible communication with Liberty and Chambers counties through the Trinity River.

Appended are a few views of the irrigation plant of the Moores Bluff Rice Company, which give a fair idea of a modern rice irrigating plant.



View of Trinity River below Liberty, Tex.

Beginning of excavation for irrigation plant on the lower Trinity River.



Pump and boiler house of irrigation plant.

Centrifugal pumping plant, showing pipe leading to flume. The pipe is 4 feet in diameter.

Construction work for pumping plant.

Excavation work for pumping plant.

TABLE 1.—*Climatological data for August, 1910. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Date.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Blanca	Costilla	8,403	1	61.4	.....	86	21†	36	26	44	1.02	.....	0.38	0.0	11	4	25	2	ne.	L. C. Audrain.
Cumbres	Conejos	10,015	3								3.47	.....	1.01	0.0	12	3	23	5	.....	Ida M. Lively.
Garnett	Costilla	7,576	17	60.9	0.0	86	21†	35	25	43	1.07	− 0.24	0.25	0.0	9	5	19	7	.....	Chas. Speiser.
Hermit	Hinsdale	9,843						28	26		2.98	.....	0.91	0.0	16	8	10	13	.....	Marion Mason.
La Veta Pass	Costilla	9,000																		Norvin R. Lively.
Manassa	Conejos	7,700	4	61.4	.....	84	22†	37	25	43	1.27	.....	0.35	0.0	8	6	18	7	nw.	J. B. Chapman.
Platoro	...do	9,675	2								3.70	.....	0.70	0.0	21	6	18	7	w.	Walter R. Hook.
Saguache	Saguache	7,740	18	64.8	+ 2.3	90	3†	38	26	50	0.84	− 0.56	0.40	0.0	6	10	4	17	w.	Eugene Williams.
San Luis	Costilla	7,794	19	62.3	+ 0.2	83	7†	39	26	43	2.13	+ 0.61	0.94	0.0	10	1	27	3	sw.	P. B. Albright.
Wagon Wheel Gap	Mineral	8,434	11	55.2	.....	83	21	30	7†	50	3.11	+ 1.01	0.40	0.0	16	3	28	0	w.	S. Eland.
New Mexico.																				
Agricultural College	Dona Ana	3,863	44	81.5	+ 2.1	102	2†	61	30	34	1.46	− 0.25	0.61	0.0	6	4	27	0	.....	New Mexico Agri. College.
Alamogordo (near)	Otero	4,338	9	78.9	.....	100	3	57	27	36	4.05	.....	1.47	0.0	12	6	24	1	sw.	Geo. C. Bemis.
Alamogordo	...do	4,320	1								2.49		1.45	0.0	8				.....	El Paso & Southwest. R. R.
Albuquerque	Bernalillo	5,000	34								1.51	+ 0.19	0.42	0.0	12	14	16	1	e.	Pitt Ross, C. E.
Ancho	Lincoln	6,112	1								2.28		0.60	0.0	7	8	8	15	.....	El Paso & Southwest. R. R.
Artesia	Eddy	3,350	2	80.4	.....	104	2†	54	26	41	2.04	.....	1.35	0.0	4	25	3	3	se.	Will Benson.
Aspen Grove Ranch	Rio Arriba	9,000	1								3.58	.....	1.22	0.0	10	2	27	2	.....	Junius D. Maupin.
Bateman's Ranch	...do	8,900	1								2.42	.....	1.03	0.0	9	11	18	2	w.	John W. Bateman.
Bluewater	Valencia	6,732	8	68.4	.....	94	21	41	7	50	1.27	.....	0.45	0.0	9	4	27	0	nw.	Bluewater Development Co.
Bluewater Reservoir	...do	9,000	1																	Do.
Boas	Chaves	4,154	1	76.4[4]	.....	101	3	50*	26	37*	3.81	.....	1.58	0.0	8	8	23	0	s.	D. C. Savage.
Capitan	Lincoln	6,348	1								4.67		1.04	0.0	12	0	26	5	s.	El Paso & Southwest. R. R.
Carlsbad	Eddy	3,120	15	83.2	+ 3.2	108	2	62	25	42	1.55	− 0.68	0.76	0.0	5	17	11	3	s.	U. S. Reclamation Service.
Carrizozo	Lincoln	5,429	2								2.51		1.67	0.0	6	6	24	1	e.	El Paso & Southwest. R. R.
Carson Park	Taos	7,650									2.11		0.55	0.0	9				.....	Lester S. Myers.
Chama	Rio Arriba	7,851	11	63.2	− 1.4	88	22	39	31	40	2.27	− 0.33	0.80	0.0	6	20	11	0	sw.	Frank C. Johnson.
Clouderoft	Otero	8,650	7	58.6	.....	78	2	43	26†	31	7.31	.....	1.38	0.0	14	12	11	8	nc.	El Paso & Southwest. R. R.
Corona	Lincoln	6,666	1								2.59		0.81	0.0	8				s.	Do.
Coyote	...do	5,800	1								3.03		0.90	0.0	14	6	3	22	se.	Do.
Cundiyo	Santa Fe	6,889	1								1.76		0.50	0.0	11	7	11	13	w.	Teofilo Vijil.
Demonstration Farm	San Miguel	6,800	1								3.71		1.22	0.0	14				.....	Erb & Westerman.
Duran	Torrance	6,272	1								2.61		0.90	0.0	6	6	22	3	.....	El Paso & Southwest. R. R.
Elk (near)	Chaves	7,400	11																	Boyd Williams.
Escondido	Otero	4,014	1			104	23				3.06		1.15	0.0	8	7	20	4	se.	El Paso & Southwest. R. R.
Espanola	Rio Arriba	5,590	12																.....	Mrs. E. F. McBride.
Estancia	Torrance	6,140	5	72.6	.....	95	9†	50	10	41	2.59	.....	1.00	0.0	10	13	13	5	e.	New Mex. Cent. R./R.
Fort Stanton	Lincoln	6,231	32	69.4	+ 2.2	94	24	44	26	42	4.57	+ 1.07	1.31	0.0	17	12	7	12	e.	U. S. Sanitarium.
Fort Sumner	Guadalupe	3,960	2																	F. A. Manzanares.
Gallinas	Lincoln	6,635	1								1.03		0.75	0.0	3	18	4	9	w.	El Paso & Southwest. R. R.
Gallinas Planting Station	San Miguel	7,500	3	64.3	.....	86	21†	42	26	38	3.96	.....	0.68	0.0	17	0	29	2	sw.	U. S. Forest Service.
Harvey's Upper Ranch	...do	9,400	1								6.56	.....	1.73	0.0	17	11	16	4	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	13																.....	Dr. Frank I. Givens.
Hodges	Taos	8,484	1																.....	A. Porter.
Hondo Reservoir	Chaves	3,904	1	78.6	.....	103	2	52	26	38	4.09	.....	2.00	0.0	9	14	9	8	se.	U. S. Reclamation Service.
Hope	Eddy	4,000	3																	A. W. Board.
Hopewell	Rio Arriba	9,500	1	55.5	.....	79	22	35	31	37	2.95	.....	0.56	0.0	15	6	13	12	nc.	John T. Blanton.
Jemez Springs	Sandoval	6,100									2.17	.....	0.65	0.0	9	9	17	5	sw.	Linus L. Shields.
Knowles (near)	Eddy	4,300		79.0	.....	104	2	58	26†	36	3.71	.....	2.77	0.0	7	9	18	4	se.	J. W. Mosley.
Laguna	Valencia	5,840	5	75.4	.....	98	20†	52	28	40	1.63	.....	1.10	0.0	4	8	15	8	.....	Gus Weiss.
Lagunita	Guadalupe	4,500	5	73.9	.....	98	2	52	31	40	5.59	.....	1.86	0.0	11	16	11	4	se.	P. A. Turnbull.
Lake Valley	Sierra	5,412	5								1.24		0.54	0.0	10	1	30	0	sw.	Wm. P. Keil.
Las Vegas	San Miguel	6,384	23	69.2	+ 1.3	96	24	44	27	50	3.72	+ 0.34	0.77	0.0	14	13	10	8	w.	Dr. Wm. Curtiss Bailey.
Liston	Chaves	5,000									4.30		3.00	0.0	7	13	16	2	sw.	H. G. Liston.
Los Lunas (near)	Valencia	4,900	20	75.5	+ 1.3	100	6	50	31	40	0.31	− 0.85	0.18	0.0	3	10	20	1	.....	Richard Pohl.
Los Tanos	Guadalupe	4,919	1																	El Paso & Southwest. R. R.
Magdalena	Socorro	6,557	5	70.7	.....	93	22	49	25	39	2.86	.....	0.70	0.0	11	3	25	3	w.	Wm. Pender.
Mineral Hill	San Miguel	7,050	5								3.42		0.65	0.0	9	0	31	0	sw.	W. M. Nelson.
Monterey	Otero	4,436	1			98	2†				2.14		1.49	0.0	7	9	19	3	sw.	El Paso & Southwest. R. R.
Mountainair	Torrance	6,547	8	69.9	.....	95	21†	49	26	37	3.28	.....	1.33	0.0	8	13	14	4	sw.	Mrs. John W. Corbett.
Newman	Otero	3,989	1								1.32		0.67	0.0	5	15	16	0	e.	El Paso & Southwest. R. R.
Noria	Dona Ana	4,114	1			106	2†				1.24		0.32	0.0	7	13	13	5	w.	Do.
Orange	Otero	5,000	1			107	3				0.95		0.55	0.0	3	6	21	4	n.	Jas. Brownfield, jr.
Orogrande	...do	4,171	1								1.11		0.58	0.0	3	7	23	1	w.	El Paso & Southwest. R. R.
Oscura (near)	Lincoln	5,016	1								1.54		0.52	0.0	13	14	15	2	s.	Eugene F. Jones.
Otis	Eddy	3,100	1								1.74		0.78	0.0	8	25	1	5	se.	A. M. Hove.
Otto	Santa Fe	6,200	1								2.62		1.70	0.0	6				.....	W. K. Davis.
Pastura	Guadalupe	5,285	1			105	2†	50	5†		5.19	.....	2.86	0.0	10	9	18	4	ne.	El Paso & Southwest. R. R.
Picacho (near)	Lincoln	5,000																		P. D. Southworth.
Plainview (near)	Chaves	4,300																		L. P. Adair.
Red River Canyon	Taos	8,956	2	60.1		80	2†	36	27	44	3.40	.....	0.50	0.0	13	6	23	2	e.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,030	12	81.8	+ 3.9	105	3	61	26†	39	1.89	− 0.55	0.96	0.0	5	1	15	15	s.	Chas. H. Raitt.
Rio Grande Dam	Sierra	4,265	12	80.5	+ 4.3	103	22	59	31	38	0.97	− 1.67	0.32	0.0	6	10	20	1	w.	U. S. Reclamation Service.
Rosedale	Socorro	6,910	5	68.3	.....	87	22	50	26	31	3.96	.....	0.68	0.0	21	10	6	15	w.	W. H. Martin.
Roswell	Chaves	3,578	12	77.4	+ 0.8	99	2	52	26	36	2.03	+ 0.57	1.01	0.0	10	9	15	7	se.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	80.4	+ 3.2	101	13†	59	7	40				0.0		4	23	4	se.	Atch., Topeka & S. F. R. R.
San Rafael	Valencia	6,509	6	74.0	.....	102	10	47	17	53	2.51	.....	0.82	0.0	10	14	7	10	s.	Dr. Chas. M. Grover.
Santa Fe	Santa Fe	7,013	37	67.8	+ 0.8	85	21	48	26	31	1.91	− 0.45	0.84	0.0	11	5	25	1	ne.	U. S. Weather Bureau.
Santa Fe Canyon	...do	8,000	1								0.84		0.40	0.0	4	17	6	8	e.	Candelario Martinez.
Santa Rosa	Guadalupe	4,624	10	77.1		102	2†	48	26	44	3.14	− 0.29	0.63	T.	15	7	24	0	w.	John R. Chapman.
Socorro	Socorro	4,600	18	78.0	+ 1.9	106	21	48	6	50	1.65	+ 0.27	0.85	0.0	10	14	17	0	s.	J. J. Leeson.
Stanley	Santa Fe	6,317	1	71.2	.....	95	21	42	26	48	1.12		0.33	0.0	6	13	16	2	se.	Henry Winan.
Strauss	Dona Ana	4,080	11								1.32	− 0.39	0.52	0.0	10	5	13	13	e.	Southern Pacific R. R.
Swastika Ranch	Valencia	6,400	1								2.74		1.12	0.0	9					Swastika S. & L. Co.
Taft	Guadalupe	5,000									5.00		1.65	0.0	8	0*	14*	4*	s.	A. J. Wilmeth.
Tajique (near)	Torrance	6,900									2.14		0.39	0.0	11	4	26	1	.....	U. S. Forest Service.
Taos	Taos	6,983	12	69.0	+ 1.4	93	22	45	6	42	1.80	− 0.10	0.45	0.0	10	15	16	0	sw.	Alexander Gusdorf.
Taos Canyon	...do	8,959	1								2.59		0.42	0.0	17					Leocadio Martinez, jr.
Tecolote	Lincoln	6,539	1								3.95		0.96	0.0	17	3	22	6	w.	El Paso & Southwest. R. R.
Three Rivers	Otero	4,559	1								1.65		0.68	0.0	9	18	4	9	.....	Do.
Tijeras Canyon	Bernalillo	6,214	1								2.34		0.82	0.0	9	17	13	1	sw.	U. S. Forest Service.
Torrance	Torrance	6,433	1								4.14		1.60	0.0	11	7	19	5	sw.	El Paso & Southwest. R. R.
Tres Piedras	Taos	8,076	5	63.2	.....	85	2†	40	26†	42	2.23	.....	0.65	0.0	9	11	20	0	sw.	Edwin B. Seward.
Truchas	Rio Arriba	7,935	1	58.8	.....	83	21	34	13	41	2.10	.....	0.40	0.0	9	0	31	0	.....	Ignacio Cordova.
Tularosa	Otero	4,436		78.5	.....	101	2†	54	26	39	2.47	.....	1.90	0.0	7	10	21	0	sw.	Irby L. Fairless.
Vaughn	Guadalupe	5,952	1								0.34		0.20	0.0	4					El Paso & Southwest. R. R.
Virsylvia	Taos	7,500				90	20	48	25		0.24	.....	0.72	0.0	15	21	6	4	s.	Dr. I. N. Woodman.

TABLE 1.—*Climatological data for August, 1910. District No. 8*—Continued.

Stations	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Mexico—Cont'd.																			
Winsors	San Miguel	8,209	12	60.4	+ 1.8	84	17	37	7	43	6.07	+ 2.41	0.89	0.0	16	4	11	16	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	25	85.9	+ 4.7	105	2	64	27	31	2.87	+ 0.80	2.58	0.0	5	11	12	8	s.	U. S. Weather Bureau.
Albany	Shackelford	1,429	16	84.9	+ 2.8	109	2†	60	27	41	1.28	− 0.42	1.18	0.0	3	23	5	3	.....	N. L. Bartholomew.
Anahuac‖	Chambers	23	1	.....	.....	.....	.....	.....	.....	.....	1.27	.....	0.45	0.0	5	.....	.....	.....	.....	B. H. Collins.
Austin	Travis	593	54	86.4	+ 2.7	100	2†	72	26†	26	0.07	− 2.34	0.07	0.0	1	11	18	2	sw.	A. Deussen.
Ballinger	Runnels	1,637	15	86.6	+ 4.1	108	2	63	27	37	0.75	− 1.57	0.40	0.0	2	18	10	3	s.	E. M. Eubank.
Barstow	Ward	2,573	3	83.9	.....	106	24	64	1	36	1.02	.....	1.02	0.0	1	28	3	0	se.	W. H. Denis.
Bay City	Matagorda	53	.....	.....	.....	.....	.....	.....	.....	.....	1.64	.....	1.23	0.0	2	12	7	12	s.	E. C. Quereau.
Beaumont	Jefferson	29	13	84.3	.....	97	21†	73	6†	22	3.35	− 0.97	1.20	0.0	8	16	0	15	se.	John Bender.
Beeville	Bee	225	14	86.0	+ 0.8	103	21	69	24	31	0.26	− 2.35	0.22	0.0	2	13	12	6	se.	L. E. Dickey.
Big Springs	Howard	2,396	12	87.3	.....	109	2†	59	26	41	0.04	− 1.74	0.04	0.0	1	12	19	0	s.	B. Reagan.
Blanco	Blanco	1,350	14	84.6	+ 1.9	104	12	61	27	38	0.37	− 1.53	0.23	0.0	2	19	12	0	s.	R. C. Crist.
Boerne	Kendall	1,412	18	86.8	+ 5.2	104	12†	65	19†	36	T.	− 2.20	T.	0.0	0	17	13	1	se.	F. W. Schweppe.
Booth	Fort Bend	81	9	.....	.....	.....	.....	.....	.....	.....	1.71	.....	0.85	0.0	7	25	0	6	sw.	T. R. Booth.
Boquillas	Brewster	.....	.....	93.1	.....	113	2	74	19†	31	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	J. O. Langford.
Bowie	Montague	1,113	16	87.0	+ 4.5	111	3	64	26†	33	1.63	− 0.06	1.02	0.0	3	9	13	9	s.	Craig Anderson.
Brazoria	Brazoria	25	21	84.0	+ 3.0	99	15	71	1†	27[b]	0.71	− 4.35	0.25	0.0	7	27[b]	2[b]	0[b]	s.	Mrs. M. A. Stevens.
Brazos	Palo Pinto	801	1	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	9	20	2	sw.	Robt. E. Boyett.
Brenham	Washington	350	21	87.4	+ 3.9	103	13†	72	27	26	0.12	− 2.59	0.09	0.0	2	16	12	3	s.	Mrs. B. F. Sloan.
Bridgeport	Wise	754	1	.....	.....	.....	.....	.....	.....	.....	0.58	.....	0.40	0.0	4	15	11	5	s.	Claude Strange.
Brighton	Nueces	12	14	82.6	− 0.5	96	26	72	28†	20[a]	1.46	− 0.22	1.46	0.0	1	21	6	4	se.	G. H. Ritter.
Brownsville	Cameron	38	21	84.0	+ 1.1	96	14†	70	20	22	7.26	+ 4.46	5.72	0.0	7	.....	.....	.....	s.	U. S. Weather Bureau.
Brownwood	Brown	1,342	20	86.8	+ 3.1	108	2†	60	26†	42	0.25	− 1.71	0.15	0.0	2	20	8	3	s.	Mrs. Pearl Smith.
Cameron	Milam	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Watts.
Carmona	Polk	330	2	85.2	.....	101	22	64	29	36	0.60	.....	0.30	0.0	5	15[a]	13[a]	2[a]	s.	M. S. Spitler.
Claytonville	Fisher	2,100	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. Lanius.
Coleman	Coleman	1,710	16	86.4	+ 5.7	107	3	65	26	32	0.85	− 2.23	0.50	0.0	2	13	15	3	se.	J. E. Stevens.
College Station	Brazos	308	19	86.8	+ 3.8	104	14	70	27†	30	1.14	− 1.00	0.55	0.0	6	21	9	1	s.	Prof. G. S. Fraps..
Colorado	Mitchell	2,006	16	83.2	+ 0.5	106	3	57	27	40	0.99	− 1.08	0.35	0.0	4	.....	.....	.....	s.	R. M. Webb.
Columbia	Brazoria	34	21	83.5	+ 1.7	100	9†	68	5†	31	1.16	− 2.58	0.80	0.0	5	17	14	0	s.	R. B. Loggins.
Columbus	Colorado	206	6	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.76	0.0	3	20	11	0	sw.	Mrs. Sophie Bridge.
Comstock	Valverde	1,557	1	88.6	.....	102	2†	69	20	29	0.00	.....	0.00	0.0	0	22	3	6	se.	E. F. Prosser.
Corpus Christi	Nueces	20	23	82.4	+ 0.3	94	26	73	31	17	2.76	+ 0.48	1.20	0.0	6	13	12	6	se.	U. S. Weather Bureau.
Corsicana	Navarro	445	21	88.6	+ 5.3	106	3	68	26†	31	2.12	+ 0.16	1.96	0.0	3	20	4	7	se.	E. L. Gibson.
Crockett	Houston	350	6	87.1	.....	105	9	71	27	31	0.83	.....	0.83	0.0	1	20	11	0	s.	A. M. Rencher.
Cuero	DeWitt	177	21	87.6	+ 2.8	104	16	71	1†	31	0.72	− 1.13	0.51	0.0	4	16	8	7	s.	H. R. Frobese.
Dallas	Dallas	466	21	87.4	+ 4.4	107	22	67	27†	35	0.22	− 2.82	0.22	0.0	1	15	1	15	s.	G. A. Eisenlohr.
Danevang	Wharton	145	14	84.9	+ 1.1	99	1†	70	5	27	0.60	− 2.79	0.60	0.0	1	30	1	0	se.	H. P. Hermansen.
Decatur	Wise	1,047	14	.....	.....	.....	.....	.....	.....	.....	0.98	− 1.29	0.97	0.0	2	11	16	4	.....	Fort Worth & Denver Ry.
Del Rio	Valverde	952	4	87.9	+ 3.9	102	23	70	26	27	0.26	− 1.23	0.26	0.0	1	24	7	0	se.	U. S. Weather Bureau.
Devine‖	Medina	653	....	87.6	.....	104	2†	64	31	32	1.38	.....	1.38	0.0	1	29	1	1	se.	M. A. Keller.....
Dialville	Cherokee	575	6	85.6	.....	103	21	67	27	29	0.26	.....	0.20	0.0	2	12	16	3	s.	J. M. B. Knight.
Dilley	Frio	569	....	.....	.....	.....	.....	.....	.....	.....	1.00	.....	1.00	0.0	1	.....	.....	.....	.....	John W. Miller.
Dublin	Erath	1,466	15	85.8	+ 3.8	109	3	65	26†	34	0.95	− 0.99	0.65	0.0	2	18	7	6	s.	Jno. O. Shafer.
Duval	Travis	820	21	85.6	+ 1.4	100	2†	71	26†	27	0.45	− 1.31	0.45	0.0	1	18	8	5	se.	J. C. Edgar.
Eagle Pass	Maverick	800	21	92.0	+ 6.1	107	3	75	3†	32	1.02	− 1.57	0.90	0.0	2	0	31	0	.....	Jos. Metcalfe.
Edna	Jackson	71	1	.....	.....	.....	.....	.....	.....	.....	1.05	.....	0.50	0.0	3	.....	.....	.....	.....	E. L. Faires.
El Paso	El Paso	3,762	31	82.2	+ 3.6	101	2	65	26	29	1.18	− 0.54	0.38	0.0	11	16	15	0	ne.	U. S. Weather Bureau.
Encinal	La Salle	558	2	87.8	.....	106	2†	70	1†	34	1.00	.....	0.85	0.0	2	13	14	4	se.	H. C. Braden.
Fairland	Burnet	1,000	22	87.0	.....	106	2†	69	2†	37	1.76	− 0.31	1.00	0.0	3	25	6	0	s.	R. L. Bush.
Falfurrias	Starr	.....	3	86.3	.....	105	2†	68	19†	35	1.31	.....	1.01	0.0	3	20	10	1	se.	W. A. Gardner.
Flatonia	Fayette	465	2	86.2	.....	102	12†	71	19†	28	0.96	.....	0.47	0.0	5	14	16	1	s.	Fred W. Laux.
Flint‖	Smith	483	....	86.0	.....	105	23	69	30	32	0.20	.....	0.15	0.0	3	17	11	3	s.	F. C. C. Carter.
Fort Clark	Kinney	1,050	23	87.4	+ 2.4	103	2	68	25†	30[a]	0.35	− 1.57	0.30	0.0	2	16	13	2	e.	Post Hospital.
Fort McIntosh	Webb	460	24	91.2	+ 4.4	106	2	74	31	27	1.75	− 0.96	1.75	0.0	1	13	3	15	e.	Do
Fort Stockton	Pecos	3,050	13	85.8	+ 7.4	109	2	59	26	44	T.	− 2.30	T.	0.0	0	7	24	0	se.	H. H. Buts.
Fort Worth	Tarrant	670	15	86.4	+ 3.5	104	2	67	27	28	0.26	− 1.61	0.18	0.0	4	8	22	1	s.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	21	83.8	+ 3.4	101	12	67	24	32	0.17	− 2.19	0.13	0.0	2	14	17	0	s.	Arthur Striegler.
Gainesville	Cooke	738	21	85.4	+ 3.2	107	2†	61	27	32	1.64	− 0.54	0.94	0.0	5	.....	.....	.....	.....	J. L. Hickson.
Galveston	Galveston	69	40	83.8	+ 1.2	90	24	71	19	15	2.01	− 3.00	1.24	0.0	5	16	14	1	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	6	86.8	.....	104	10	67	26	30	3.65	.....	3.65	0.0	1	27	4	0	.....	John Ryan.
Georgetown	Williamson	750	15	86.8	+ 3.7	105	22	68	26†	34	0.86	− 1.01	0.73	0.0	3	27	4	0	s.	Prof. R. F. Young.
Gonsales	Gonsales	299	5	.....	.....	.....	.....	.....	.....	.....	0.05	.....	0.05	0.0	1	17	10	4	s.	J. M. Johnson.
Graham	Young	1,040	11	89.0	+ 5.5	112	3	70	14	38	0.77	− 1.92	0.38	0.0	5	21	6	4	s.	C. W. Johnson.
Grand Saline	Van Zandt	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.70	.....	1.28	0.0	5	14	15	2	s.	F. E. Whittemore.
Grapevine	Tarrant	670	20	88.2‖	.....	107	1	68	10	35‖	0.72	− 0.87	0.72	0.0	1	2‖	14‖	5‖	s.	W. J. Crowley..
Greenville	Hunt	550	10	87.4	+ 3.2	107	3†	65	27	31	0.00	− 2.31	0.00	0.0	0	16	0	15	s.	J. P. Regan.
Hallettsville	Lavaca	235	19	87.5	+ 3.8	103	5	73	14†	28	0.05	− 1.98	0.05	0.0	1	21	9	1	s.	Dr. J. E. Lay.
Harper	Gillespie	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.17	.....	0.17	0.0	1	8	23	0	.....	Christian Fritz.
Haskell	Haskell	4,013	19	87.1	+ 3.9	114	2	63	25†	40[a]	0.88	− 0.64	0.35	0.0	4	13	15	3	s.	P. D. Sanders.
Hebbronville	Duval	.....	3	.....	.....	.....	.....	.....	.....	.....	0.47	.....	0.25	0.0	3	.....	.....	.....	.....	Henry Edds.
Hempstead	Waller	254	6	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.50	0.0	2	13	7	11	sw.	J. H. Hancock.
Henderson	Rusk	500	1	.....	.....	.....	.....	.....	.....	.....	2.62	.....	0.80	0.0	7	14	10	7	.....	M. Kangerga.
Hewitt	McLennan	664	15	.....	.....	.....	.....	.....	.....	.....	0.58	.....	0.34	0.0	4	.....	.....	.....	.....	I. H. Earle.
Hillsboro	Hill	628	7	87.6	.....	107	1	66	27	36	0.27	.....	0.27	0.0	1	.....	.....	.....	.....	Thompson & Campbell.
Hondo	Medina	901	8	88.3	.....	103	13†	71	27†	32	0.80	− 0.87	0.80	0.0	1	26	5	0	.....	H. E. Haass.
Houston	Harris	138	21	84.6	+ 2.4	98	12	73	27	23	2.45	− 1.48	1.73	0.0	6	18	13	0	s.	U. S. Weather Bureau.
Huntsville	Walker	400	22	84.6	+ 1.8	99	1†	69	27†	27	0.65	− 1.73	0.35	0.0	3	15	0	16	s.	W. Y. Barr.
Jayton	Kent	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.55	0.0	3	.....	.....	.....	sw.	Wichita Valley Ry. Co.
Jewett	Leon	496	6	89.3	.....	110	10	67	27	36	0.09	.....	0.09	0.0	1	11	15	5	s.	Earle Adkisson.
Junction	Kimble	1,645	7	86.2	.....	107	3†	62	26†	39	0.00	.....	0.00	0.0	0	30	1	0	.....	Judge John S. Durst.
Kaufman	Kaufman	448	11	88.6	+ 3.9	107	1	66	27	35	0.91	− 0.28	0.52	0.0	2	10	19	2	s.	B. J. Hubbard.
Keene	Johnson	940	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Industrial Academy.
Kerrville	Kerr	1,650	15	85.8	+ 4.6	102	22	65	24	34	0.00	− 1.86	0.00	0.0	0	11	20	0	.....	Mrs. F. Coleman.
Knickerbocker	Tom Green	2,050	6	87.8	.....	100	13	60	27	41	T.	.....	T.	0.0	0	20	10	1	e.	Jos. Tweedy.
Kopperl	Bosque	576	13	.....	.....	.....	.....	.....	.....	.....	T.	− 1.83	T.	0.0	0	11	12	8	s.	T. A. Johnson.
Lagrange	Fayette	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	22	5	4	se.	August Hermes.
Lamesa	Dawson	2,500	.....	.....	.....	.....	.....	.....	.....	.....	0.55	.....	0.21	0.0	4	.....	.....	.....	.....	S. D. Austin.
Lampasas	Lampasas	1,026	19	86.8	+ 4.2	107	1	67	27†	34	0.65	− 1.21	0.56	0.0	3	22	5	4	s.	Mrs. K. I. Webber.
La Parra	Cameron	38	8	.....	.....	.....	.....	.....	.....	.....	1.44	.....	0.52	0.0	3	.....	.....	.....	.....	Jno. G. Kenedy.
Laureles Ranch	Nueces	20	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Matt Cody.
Liberty	Liberty	38	6	83.2	.....	99	11†	70	7†	29	1.95	.....	1.00	0.0	5	22	8	1	s.	Mrs. Fannie Sneed.
Llano	Llano	1,040	19	88.2	+ 4.1	106	2†	69	27	33	T.	− 1.35	T.	0.0	0	30	1	0	se.	E. W. Torrence.
Llano Grande	Hidalgo	86	2	81.4	.....	101	15	64	18†	35	2.35	.....	1.15	0.0	3	23	5	3	se.	M. D. Wardlow.
Long Lake	Anderson	229	5	.....	.....	.....	.....	.....	.....	.....	0.19	.....	0.10	0.0	2	24	5	2	s.	Geo. W. Ellis.
Longview	Gregg	336	21	85.8	+ 2.5	107	2	67	27†	32	0.72	− 1.12	0.31	0.0	5	21	2	8	se.	C. A. Propst.

TABLE 1.—*Climatological data for August, 1910. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Lufkin	Angelina	325	3	85.6	.....	104	2	68	31	31	0.42	.....	0.26	0.0	2	23	6	2	s.	T. A. King.
Luling	Caldwell	418	21	86.3	+ 2.5	102	21	71	30	28	0.05	− 1.88	0.05	0.0	1	22	8	1	s.	John Carter.
Marathon	Brewster	4,043	...	78.0	.....	99	3	55	26	33	0.25	.....	0.15	0.0	2	5	15	11	s.	Rev. A. P. Willis.
Marble Falls	Burnet	771	2	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.66	0.0	2	17	10	4	sw.	Wm. Harrison.
Marfa	Presidio	.....	2	.....	.....	.....	.....	.....	.....	.....	0.90	.....	0.50	0.0	3	.....	.....	.....	.....	R. K. Colquitt.
Marshall	Harrison	375	1	83.0	.....	102	2†	65	27	29	3.16	.....	1.68	0.0	7	0	29	2	sw.	Lee Scott.
Matagorda	Matagorda.	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.35	.....	0.53	0.0	3	22	7	2	se.	W. E. McNabb.
Mexia	Limestone	537	6	85.4	.....	105	22	66	27	33	2.10	.....	1.60	0.0	2	9	16	6	w.	Miss Josephine Newman.
Midland	Midland	.....	3	.....	.....	.....	.....	.....	.....	.....	0.28	.....	0.28	0.0	1	19	12	0	se.	H. J. Elder.
Mission	Hidalgo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. H. Romig.
Mont Belvieu§	Chambers	65	.....	.....	.....	.....	.....	.....	.....	.....	3.14	.....	1.25	0.0	7	9	21	1	s.	A. R. Shearer.
Mountain View	Pecos	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.15	.....	0.15	0.0	1	.....	.....	.....	.....	Lucius W. Gosselin.
Mt. Blanco	Crosby	2,750	22	79.4	+ 1.7	105	3	53	26	38	3.91	+ 1.36	1.61	0.0	4	14	10	7	s.	H. C. Smith.
Nacogdoches	Nacogdoches	271	11	82.8	+ 1.2	99	23	68	31	27	1.84	− 0.57	0.70	0.0	4	18	4	9	ne.	Miss Mary Hofmann.
New Braunfels	Comal	720	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Giesecke.
Palestine	Anderson	510	28	84.4	+ 3.9	99	21	69	27	24	0.96	− 1.26	0.76	0.0	3	15	14	2	s.	U. S. Weather Bureau.
Panter	Hood	1,000	20	.....	.....	.....	.....	.....	.....	.....	0.15	− 2.21	0.09	0.0	2	.....	.....	.....	.....	E. H. Snider.
Pearsall	Frio	629	.....	.....	.....	.....	.....	.....	.....	.....	0.56	.....	0.49	0.0	2	.....	.....	.....	.....	Earnest De Vilbiss.
Pierce	Wharton	102	4	81.3	.....	99	21	67	4	29	0.57	.....	0.31	0.0	3	14	15	2	.....	R. B. Pointer.
Plainview	Hale	3,370	18	77.6	.....	103	2	50	26	40	2.67	+ 0.23	1.31	0.0	11	12	18	1	s.	J. F. Sander.
Port Lavaca	Calhoun	20	9	86.0	.....	99	9†	70	30	25[b]	0.70	.....	0.50	0.0	3	20	9	2	s.	J. H. Bickford.
Post City	Garza	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.08	.....	0.34	0.0	4	17	13	1	s.	W. L. Dodd.
Ricardo	Nueces	57	1	85.4	.....	102	1†	69	24	31	2.05	.....	1.20	0.0	2	19	10	2	se.	Lindsay Waters.
Riverside	Walker	169	6	.....	.....	.....	.....	.....	.....	.....	0.23	.....	0.23	0.0	1	24	0	7	s.	Mrs. C. W. Higdon.
Robert Lee	Coke	1,850	11	84.0	.....	107	13	64	26	33[a]	0.95	− 1.06	0.47	0.0	4	25	4	2	s.	H. D. Pearce.
Rockland	Tyler	136	6	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	19	8	4	s.	D. W. Bellamy.
Rossville	Atascosa	558	3	87.1	.....	107	13	70	24†	32	0.95	.....	0.76	0.0	4	16	15	0	se.	W. F. M. Ross.
Runge	Karnes	308	15	.....	.....	.....	.....	.....	.....	.....	0.55	.....	0.30	0.0	2	.....	.....	.....	.....	Reiffert & Frobese.
Sabinal	Uvalde	964	6	87.8	.....	105	13	71	19†	31	0.25	.....	0.15	0.0	2	14	5	12	e.	Jas. Johnson.
Salado	Bell	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.90	.....	0.70	0.0	2	18	7	6	s.	L. M. Crockett.
San Angelo	Tom Green	1,847	19	87.2	.....	107	14	65	26†	32[4]	T.	− 2.89	T.	0.0	0	16	11	4	s.	Sam Crowther.
San Antonio	Bexar	701	25	86.1	+ 4.1	100	21	72	24	26	0.37	− 2.32	0.14	0.0	4	18	12	1	se.	U. S. Weather Bureau.
San Augustine	San Augustine	360	1	83.7	.....	101	23	67	30†	30	1.45	.....	1.45	0.0	1	13	10	8	.....	F. A. Wilson.
San Juanito§	Hidalgo	.....	1	.....	.....	105	2	.....	.....	.....	1.80	.....	1.75	0.0	2	16	4	1	se.	J. B. McAllen.
San Marcos	Hays	588	17	85.4	+ 2.3	100	2†	69	24	30	0.36	− 1.32	0.36	0.0	1	27	0	4	s.	Miss L. C. Ford.
San Saba	San Saba	1,712	6	86.8	.....	105	2†	64	27	33	0.06	.....	0.06	0.0	1	27	4	0	s.	Jas. Burns.
Santa Gertrudes	Nueces	.....	8	.....	.....	.....	.....	.....	.....	.....	2.96	+ 0.67	1.94	0.0	2	.....	.....	.....	.....	J. B. Wright, jr.
Seymour	Baylor	1,320	4	84.2	.....	109	3	59	27	34	2.11	.....	1.43	0.0	4	19	3	9	s.	F. M. Deaver.
Sligo	Yoakum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. N. Anderson.
Somerville	Burleson	251	1	85.7	.....	103	11†	65	26	33	0.06	.....	0.04	0.0	2	11	20	0	s.	W. A. Dolan.
Sonora	Sutton	2,200	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mike Murphy.
Sugarland	Fort Bend	79	12	.....	.....	105	10†	.....	.....	.....	3.05	− 0.05	1.75	0.0	4	25	0	6	s.	Cunningham Sugar Co.
Sutherland Springs§	Wilson	.....	.....	88.4	.....	105	3	70	2	32	0.59	.....	0.47	0.0	2	24	5	2	s.	W. A. Clark.
Taylor	Williamson	583	9	85.8	+ 4.1	101	21	70	26	26	0.05	− 2.42	0.04	0.0	2	23	8	0	s.	U. S. Weather Bureau.
Temple	Bell	630	16	86.4	+ 3.9	100	2	68	26	30	0.62	− 1.30	0.55	0.0	3	22	8	1	s.	W. Goodrich Jones.
Theodore	Winkler	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.80	.....	1.65	0.0	2	.....	.....	.....	.....	W. H. Gibbs.
Thurber	Erath	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.26	0.0	2	.....	.....	.....	.....	J. K. Ball.
Tilden	McMullen	.....	4	88.9	.....	108	2†	65	9	41[b]	0.30	.....	0.21	0.0	2	11	17	3	se.	Wm. Kuykendall.
Tivoli	Refugio	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.77	0.0	1	17	12	2	.....	W. H. Gisler.
Uvalde	Uvalde	937	2	87.6	.....	105	14	71	1	32[b]	T.	.....	T.	0.0	0	7	24	0	se.	F. M. Getzendaner.
Valley Junction	Robertson	289	10	.....	.....	.....	.....	.....	.....	.....	0.00	− 2.00	0.00	0.0	0	19	11	1	s.	T. M. Williams.
Victoria	Victoria	187	12	86.9	+ 4.4	103	21	72	24	28	0.80	− 2.08	0.45	0.0	2	23	5	3	s.	C. C. Zirjacks.
Waco	McLennan	424	21	89.3	+ 4.4	105	1†	70	26	28	T.	− 2.64	T.	0.0	0	22	1	8	s.	E. H. Hall.
Waxahachie	Ellis	556	14	86.9	+ 3.0	106	2†	67	27†	34	2.31	+ 0.42	2.25	0.0	2	20	6	5	s.	C. D. Longserre.
Weatherford	Parker	864	21	86.6	+ 4.3	105	3	67	27	30	0.19	− 1.88	0.16	0.0	2	19	8	4	n.	Miss J. Stickfort.
Wharton	Wharton	105	8	84.6[c]	.....	100	3†	70	25	26	2.38	.....	0.74	0.0	7	20	5	6	s.	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	5	88.3	.....	104	2†	67	26	36	2.13	.....	2.05	0.0	2	23	4	4	s.	W. W. Gibbard.
Zapata	Zapata	300	1	89.4	.....	109	2	68	30	34	0.59	.....	0.49	0.0	2	17	11	3	se.	F. H. Earnest.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 8, Texas and Rio Grande Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blanca	Rio Grande	.01			.38	.05		T.	.01			.14	.04	.12			.03						.07	T.	.06				T.	T.	.11		1.02
Cumbres	do	.10	.09		.71	.30				47		.49	.30		.06						12		.10								.58	.15	3.47
Garnett	do				.24	.03						.18	.25	.19	.06		T.							T.	.02				.06	.04	T.		1.07
Hermit	do		.08		.43		T.		.10	.05	.15	T.	.26	.02	T.		.06	.01	T.	T.	.91	.05	.27	.21	T.		T.	T.	.31		.05	.02	2.98
La Veta Pass	do																																
Manassa	do	T.			.22	.02		T.	.15	.18	T.	T.	.35	.10							.05				T.	T.				T.	.20	T.	1.27
Platoro	do	.03	.01	.22	.70	.25	T.		.01	.34	.07	.29	.27	.06	.12		T.	.08	.09	.10	.02	T.	.62	.18	.07						T.	.04	.11	3.70
Saguache	do	T.			.07	.05								.12	.10		T.				.40		T.	.10							T.	0.84
San Luis	do					.94			T.	.05		.20	T.	.04				.05					.27	.17	.11				.05		.25	T.	2.13
Wagon Wheel Gap	do	.20	.10	.30	.20					.20		.10	.40										.30	.20	.01		.30	.20	.10	.30	.10	.10	3.11
New Mexico.																																	
Agricultural College	Rio Grande				.61			.03			.45				.01					.05										.31		T.	1.46
Alamogordo (near)	do				.02		.20	.10	.06	.09	1.47				.38	T.		.89	.18	.33										T.	.15	.18	4.05
Alamogordo	do					.06	.04	.03			1.45				.33				.27												.21	.10	2.49
Albuquerque	do	.12	.05	.17	.02				.15	.15	.07	.11	T.									.37	.05								.09	.16	1.51
Ancho	do										.50	.42	.06			.20			.60						.30							.20	2.28
Artesia	Pecos					.50					.14	.05			1.35																		2.04
Aspen Grove Ranch	Rio Grande				1.22				.12	.02	.21	.31	.22		.08				.58				.16								.66		3.58
Batemans Ranch	do	.25		.03	.55					.05	.27	.05	.17						T.	T.	T.	T.				T.				T.	1.00	.03	2.42
Bluewater	do	.13		.09	.36	.05					T.	.27	T.		.10						T.			.13		T.	T.		T.	.09		.05	1.27
Bluewater Reservoir	do																																
Boaz	Pecos			.03		.57				.88	.21	.27			.10			.17	1.58														3.81
Capitan	do								.43	.42	.80				.01	.05		1.04	*	.60						.02				.30	.04	.96	4.67
Carlsbad	do							.76			.04	.42				T.		T.		.03	.30					T.					T.		1.55
Carrizoso	Rio Grande	.02			.20						1.67												T.	T.						.02	.50	.10	2.51
Carson Park	do	.12		.06	.55	.18						.28							.25											.55	.09	.03	2.11
Chama	do			T.	.80	.03			T.	.23		.45											T.								.58	.16	2.27
Cloudcroft	Pecos				.52	.19	T.		.25	1.20	.99				.56	.65			.14	.54		.07	.33	.46							1.38	.03	7.31
Corona	do					T.			T.	.81	.31	T.	T.	T.	.50							T.	.10							.20	.10	.50	2.59
Coyote	Rio Grande		.05	.05	.15						.71		.09	.12		.90		.20	.12				.03					.07	T.	.02	.35	.21	3.03
Cundiyo	do	.23	.03		.09	.21				.15	T.		.50						.10	T.	.01							.03		.09	.10	.25	1.76
Demonstration Farm	Pecos		.05	.15	.88					.05	.30	.09		.38		.06	.10	1.22	.11											.05	.23	.04	3.71
Duran	do		T.	T.	T.	.90				T.	.55	.58	.05	T.	T.		.25	T.					T.	T.				T.	T.	T.	.28	2.61
Elk (near)	do																																
Escondido	Rio Grande			.21	.54	T.					.19				.72				.12	1.15											.11		3.06
Espanola	do																									.02							
Estancia	do	.10	.09	1.00	.72	.04					.09									.19				.11			.08			.17			2.59
Fort Stanton	Pecos		.01		.04	.65	.01			T.	.67	T.		.21	.38	.03	.02	.15	.38	.05			.08						.02	.48	.08	1.31	4.57
Fort Sumner	do																																
Gallinas	do												.08						.75													.20	1.03
Gallinas Ptg. Station	do		.01	.04	.36			.25	.03	.07	.42	.07	.21			.61	.06	.62			.23	.05	.36								.16	.41	3.96
Harveys Upper Ranch	do		.32	.68	.31	T.	.22	T.	.31	1.73	.88	.50		.09		.14	.18	T.	.21		.06		.12							.29	.30	.22	6.56
Hillsboro	Rio Grande																																
Hodges	do																																
Honda Reservoir	Pecos					.66				T.	.26		.02		.65	.26	.05		2.00							T.					.07	.12	4.09
Hope	do																																
Hopewell	Rio Grande	.07	.01	.01	.35	.30				.07		.35	.25		.08		.02		.12	.10	T.		.38	T.	T.				T.	.56	.28	2.95
Jemes Springs	do	.20		.50				.25			.25	.65									.11		.01							.13	.07	2.17
Knowles (near)	Pecos				T.	2.77		T.		.05	.47	T.			.04				.08	.03										T.	.27	3.71
Laguna	Rio Grande					T.																T.							.15	1.10	.35	.03	1.63
Lagunita	Pecos	.09		.18		.31					.04	1.78	.46		1.86				.07	.32										.02		.46	5.59
Lake Valley	Rio Grande	.01	T.	T.	T.	T.			.13	.15				.08					.08				.02					.07	.12	.04	.54	1.24
Las Vegas	Pecos		T.	.21	.01	.77			T.	.34	.51	.24	.14		.30	T.	.19	.06	.66											.17	.01	.11	3.72
Liston	do				.30							.20	.20		.15				3.00												.24	.21	4.30
Los Lunas (near)	Rio Grande	T.							T.						.05			.08														.18	0.31
Los Tanos	Pecos																																
Magdalena	Rio Grande	.30	T.	T.	.10			T.	T.	.60	T.	T.		T.	T.	T.	.03		.35			T.	.03	.15				.05	.20	.35	.70	2.86
Mineral Hill	Pecos		.55	.09	.65				.06				.45	T.	.35				.62				.40								.25	3.42
Monterey	Rio Grande			.03	.28			T.	T.	.07	1.49	T.		T.						.10									.02	.15		2.14
Mountainair	do		T.	1.33					.03	.42	.13	.16			.22	.18							T.								T.	.81	3.28
Newman	do			.07		.09	.67			.35		T.			T.						.15				T.								1.32
Noria	do				T.	.20	.10			.32		T.				.23	T.	.13		T.				.11					.15				1.24
Orange	do				.05	.35									T.					.55										T.			0.95
Orogrande	do				T.	.58		T.			.10					.43				T.									T.		T.		1.11
Oscura	do				.06	.06			.04		.40	*	.07		.02	.04		.06	.22	.03					.02							.52	1.54
Otis	Pecos		T.	T.	.20	.78			.05	T.	.05	T.			.26				.31	.03						.06							1.74
Otto	Rio Grande	T.	.04	T.	.17					1.70		.60		T.																.08	.03		2.62
Pastura	Pecos				.04	.61					*	2.86	.11				.06	.04	.41				.06									1.00	5.19
Picacho (near)	do																																
Plainview (near)	do																																
Red River Canyon	Rio Grande	.40			*	.50				.40		.30	.20	T.	.20	T.	.20	.20				.30	.30		T.		.30	.10			T.		3.40
Rincon	do					.41			.19	T.	.33				.45	.51			T.											T.			1.89
Rio Grande Dam	do			T.	T.	T.		T.	.25	T.	T.	T.	T.	T.		T.			.22	.04			T.					.08	.32	T.	.06	0.97
Rosedale	do	.52	.03	.15	.09	.01				.01	.68	.03	.15	.27	.09	.01	T.		.64			.02	T.	.28	.04		T.	.05	.16	.18	.10	.45	3.96
Roswell	Pecos				.18					T.	.27		.01	.30	.08		.05	.39	.62						T.					.12	.01	2.03
San Marcial	Rio Grande																																
San Rafael	do	.13		.08	.40					.08	.11		.20									T.		.82				T.	.12	.39	.18		2.51
Santa Fe	do	.22	T.	.09	.37	T.			T.	.06		.82	.02	T.	.02					T.	T.	.11	T.		T.	T.			T.	.03	.12	.05	1.91
Santa Fe Canyon	do				.40				T.	.03		.40																		.01			0.84
Santa Rosa	Pecos	.12		.01	.05	.34			T.	.01		.42	.57		.63	.09	T.	.05	.19	.05						.02					.04	.55	3.14
Socorro	Rio Grande									.05						.22	.10					.15		.06			.02	.06	.08	.06	.85	1.65
Stanley	do			.12	.11				.33	.24			.24																.08				1.12
Strauss	do					.04	.06			T.	.07			.02	.09			.23		.20					.41	.11			.09				1.32
Swastika Ranch	do	.13			.17				.04		.11	.15	.16														.30		.56	1.12			2.74
Taft	Pecos		1.34	.31		.37				.15	.15	.91		.12				1.65															5.00
Tajique	Rio Grande		.29	.07	.25				.01		.39	.36	.03																				2.14
Taos	do	.08		T.		.24			T.			.25	.20				.01		.39		.17		.15							.11	.31	2.14
Taos Canyon	do	.28	T.	T.	.09	.06			.33	.01		.33	.07				.02		.24	.03	.42	.15	.08	.15	.06					.23		.19	1.80
Tecolote	do	.11	.08	T.	.07	T.				.96	T.	T.		.10		.01	.62	.12	.72			.17		.13	.12	.14		.27	.04	.03		.20	2.59
Three Rivers	do				.10						.68			.15					.10			.02		.03					.10	.46	.01	3.95
Tijeras Canyon	do	.03			.76			.14	.08	.82		.37	.06										.03							.05			1.65
Torrance	Pecos	T.			.65					1.60	.20	.20	.18	.30	.20		T.	.15															2.34
Tres Piedras	Rio Grande			T.	.40	.10		T.	T.	T.	T.	.25	.08		.20	T.			.65	.10	T.		.05						.40	.06	.20		4.14
Truchas	do	T.	.30	T.	.10	.20				.10	.40		T.		.20	T.	T.	.30	T.												T.	.40	2.23
Tularosa	do				.28			.05	T.		1.90					.04			.05												.20	.30	2.10
Vaughn	Pecos										.20	.10							.03												.03	.12	2.47
Virsylvia	Rio Grande	.18		.11	.28	.72				.03		.16	.10	.03	.06																.01		0.34
Winsors	Pecos		.48	.59	.45	.51			.21			.41	.30	.10	.30	.10				.89	.30	.10								.05	.13	.02	2.04
Texas.																														.39	.21	.73	6.07
Abilene	Brazos					.03				T.		T.	T.	.02	.07			1.00	1.75														2.87
Albany	do					.06		.04		T.			T.	1.18				T.															1.28
Anahuac	Coast															.40			.15						.18				.45	.09			1.27
Austin	Colorado																		.07														0.07
Ballinger‖	do													.35					T.	.40													0.75

TABLE 2.—*Daily precipitation for August, 1910. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
Barstow	Pecos										1.02																						1.02
Bay City‖	Colorado								T.												.41										1.23	T.	1.64
Beaumont‖	Neches						.07	.02	1.20			.73	.43		.14	.73					.03							T.					3.35
Beeville‖	Coast																			.22										T.	T.	.04	0.26
Big Springs	Colorado				T.				.04					T.	T.					T.													0.04
Blanco‖	Guadalupe																				.23						.14						0.37
Boerne	San Antonio																			T.												T.	T.
Booth‖	Brazos							.15	.22									.22			.08								.14	.05	.85		1.71
Boquillas	Rio Grande																																0.00
Bowie	Trinity					T.	T.			.43	.59				.61																		1.63
Brazoria	Brazos						.20	.03	.01							T.	T.	T.	.05			T.			T.	.04			.13	.25			0.71
Brazos‖	do																																0.00
Brenham‖	do							T.	.01	T.							T.		.02											T.	.09	T.	0.12
Bridgeport‖	Trinity				T.		T.					.40	.08			.08				.02													0.58
Brighton	Coast																		1.46											T.			1.46
Brownsville	Rio Grande							.06											.34	.04	.02					.90					3.12	2.78	7.26
Brownwood‖	Colorado					.15															.10												0.25
Cameron‖	Brazos																																
Carmona	Neches					T.					.20	T.			.30	T.			.05	.03	T.				T.		.02						0.60
Claytonville	Brazos																																
Coleman	Colorado				T.			.50											T.	.35													0.85
College Station	Brazos													T.		T.			.18	.55		.07					.17			.03	.14	T.	1.14
Colorado	Colorado				.03									.28					.33	.35													0.99
Columbia	Brazos				.05											.06	.05				T.								.20	T.	.80		1.16
Columbus‖	Colorado								T.								.76			T.								.04		T.	.12		0.92
Comstock	Rio Grande																																0.00
Corpus Christi	Coast							T.										1.18	.41	.01									.02		.06	1.08	2.76
Corsicana‖	Trinity					T.	T.										.08			.08	1.96												2.12
Crockett	do											T.	T.		T.	T.					.83												0.83
Cuero‖	Guadalupe								.01											.51											.12	.08	0.72
Dallas‖	Trinity					T.						T.	T.				.22			T.													0.22
Danevang	Coast																															.60	0.60
Decatur	Trinity									.97									.01														0.98
Del Rio	Rio Grande																										26	T.					0.26
Devine	Nueces																		T.	T.											T.	1.38	1.38
Dialville	Neches		T.		T.	T.					T.				T.	.20			.06		T.					T.			T.				0.26
Dilley	Nueces																															1.00	1.00
Dublin‖	Brazos														T.	.65	.30																0.95
Duval	Colorado																			45													0.45
Eagle Pass	Rio Grande																		.12													.90	1.02
Edna	Lavaca								.10																				.50			.45	1.05
El Paso	Rio Grande			.38	T.	.01				.09	.14			.08	.01		.13			.10					T.	.07			.02		.15	1.18
Encinal	Nueces																														.15	.85	1.00
Fairland	Colorado													T.	T.		.58			1.00										.18			1.76
Falfurrias	Coast							.14											.16										T.		T.	1.01	1.31
Flatonia	Guadalupe							T.								T.	.47	.01	T.										.03	T.	.38	.07	0.96
Flint	Neches					.15					T.	T.		T.	.03											T.	.02						0.20
Fort Clark‖	Rio Grande																										.30	.05					0.35
Fort McIntosh	do																															1.75	1.75
Fort Stockton	Pecos										T.		T.							T.													T.
Fort Worth	Trinity				T.	T.				.02	.04	.18	T.	T.	.02					T.													0.26
Fredericksburg	Colorado																			.13	.04											T.	0.17
Gainesville	Trinity						.02			.94	.33			.01						.34													1.64
Galveston	Coast				.05	T.			T.						T.		T.	.16		1.24									.23	.33		T.	2.01
Gatesville	Brazos																			3.65													3.65
Georgetown‖	do																			.04		.09					.73						0.86
Gonzales‖	Guadalupe																															.05	0.05
Graham	Brazos				.05	.04				T.	T.	T.			.38	T.			.18	.12													0.77
Grand Saline	Sabine					.63							1.28	.08	T.					T.	.48					.23							2.70
Grapevine	Trinity									T.	.72	T.	T.					T.															0.72
Greenville‖	Sabine																																0.00
Hallettsville	Lavaca						T.	T.											T.										T.	.05	T.	T.	0.05
Harper	Colorado																		T.	.17	T.												0.17
Haskell	Brazos				T.		.26	T.			.12						.35			.15													0.88
Hebbronville	Coast										.01															.25						.21	0.47
Hempstead‖	Brazos							T.													T.						.20				.50	0.70
Henderson	Neches					.58					.80	T.				.21			.18	.15						.25	.45						2.62
Hewitt	Brazos					T.								T.	T.	.05				.10	.09					.34							0.58
Hillsboro	do																					.27											0.27
Hondo	Nueces																															.80	0.80
Houston	Coast							T.	.01						T.	1.43	.32	T.		.65									.02		.02		2.45
Huntsville‖	Trinity																		T.	.12							.18	T.			.35		0.65
Jayton	Brazos		.35		.55										.25																		1.15
Jewett‖	Trinity																T.		T.			.09				T.							0.09
Junction	Colorado																																0.00
Kaufman	Trinity																.29		T.	T.	.10					.52							0.91
Keene	Brazos																																
Kerrville‖	Guadalupe																																0.00
Knickerbocker	Colorado				T.										T.	T.	T.		T.	T.	T.												T.
Kopperl‖	Brazos												T.			T.				T.													T.
Lagrange	Colorado							T.								T.	T.												T.	T.			T.
Lamesa	do					.10		.09						.15					.21														0.55
Lampasas‖	Brazos																.07	.56													.02		0.65
La Parra	Coast																	.52	.42													.50	1.44
Laureles Ranch	do																																
Liberty‖	Trinity						T.	T.	T.						T.	T.		1.00	T.		.38					.05				.08	.44		1.95
Llano	Colorado																			T.													T.
Llano Grande‖	Rio Grande																		1.15												.30	.90	2.35
Long Lake‖	Trinity																.10				.09												0.19
Longview‖	Sabine										.04					.05	.11			.21							.31						0.72
Lufkin	Neches					.16									T.	.26										T.			T.		T.		0.42
Luling‖	Guadalupe								.05																							T.	0.05
Marathon	Rio Grande					T.							.10	.15	T.	T.	T.			T.													0.25
Marble Falls‖	Colorado																			T.	.66						.08						0.74
Marfa	Rio Grande					.10	.30			.50																							0.90
Marshall	Sabine					.97					.04			.22		.11			.02	.12						1.68							3.16
Matagorda	Coast																													.45	.37	.53	1.35
Mexia‖	Brazos				1.60												.50			T.		T.					T.						2.10
Midland	Colorado				.28																												0.28
Mission	Rio Grande																																
Mont Belvieu	Coast						T.	.35	1.25			T.	.10	T.		.02	T.	.23		.94									T.	.25		T.	3.14
Mountain View	Pecos													.15																			0.15
Mount Blanco	Brazos				1.61										1.10					.20										1.00			3.91
Nacogdoches‖	Neches					T.	.70										.13			.63							.38			T.			1.84

TABLE 2.—*Daily precipitation for August, 1910. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
New Braunfels	Guadalupe																																
Palestine	Trinity				T.	T.				T.		T.		T.		.18			.02							.76							0.96
Panter	Brazos																		.06	.09													0.15
Pearsall	Nueces																		.07													.49	0.56
Pierce	Colorado																	.21											.05	.31			0.57
Plainview	Brazos			T.	.25	.34	.11				.06	.07	.09		.05		.04	.02	1.31												.33		2.67
Port Lavaca	Coast				.32	.11	.31								.34				.15												.50	.05	0.70
Post City	Brazos																		.85												T.	1.20	1.08
Ricardo	Coast																																2.05
Riverside‖	Trinity				.03									T.			.08		.47	T.							.23						0.23
Robert Lee‖	Colorado																			.37													0.95
Rockland‖	Neches																																0.00
Rosevile	Nueces							.03											.06		.10									T.	.76		0.95
Runge	San Antonio							.25																						.30			0.55
Sabinal	Nueces																		.10													.15	0.25
Salado	Brazos																		.70								.20						0.90
San Angelo	Colorado													T.		T.			T.	T.													T.
San Antonio	San Antonio							.12										.12	.02										T.			.11	0.37
San Augustine	Neches			T.	1.45						T.	T.		T.	T.					T.							T.		T.	T.			1.45
San Juanito	Coast																			.05												1.75	1.80
San Marcos‖	Guadalupe								.36																								0.36
San Saba	Colorado																			.06						T.							0.06
Santa Gertrudes‖	Coast																										1.94					1.02	2.96
Seymour	Brazos			.03	1.43					.12	.53			T.	T.				T.														2.11
Sligo	Colorado																																
Somerville	Brazos																		T.	T.										.04		.02	0.06
Sonora	Rio Grande																																
Sugarland‖	Brazos						.25	.30												.75										1.75			3.05
Sutherland Springs	San Antonio							.47																								.12	0.59
Taylor	Brazos							.01					T.		T.				T.	T.						T.				.04			0.05
Temple‖	...do														.05					.02							.55			T.		T.	0.62
Theodore	Pecos									1.65				.15																			1.80
Thurber	Brazos														.14	.26																	0.40
Tilden	Nueces							T.												T.										T.	.09	.21	0.30
Tivoli	Guadalupe																													.77			0.77
Uvalde	Nueces							T.																		T.					T.	T.	T.
Valley Junction‖	Brazos																																0.00
Victoria‖	Guadalupe						.35																									.45	0.80
Waco‖	Brazos															T.			T.	T.													T.
Waxahachie‖	Trinity	T.		T.							T.	T.	T.	T.		T.	T.				2.25		T.				.06						2.31
Weatherford‖	...do	T.												.16	T.	T.		T.			.03												0.19
Wharton‖	Colorado								.37										.11	.25	.33									.74	.28	.30	2.38
Wills Point	Sabine									T.	T.	T.	T.	T.					T.	2.05						.08							2.13
Zapata	Rio Grande																															.49	0.59

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910 District No 8, Texas and Rio Grande Valley.*

Date.	Colorado.				New Mexico.														Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountainair.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min
1...	82	47	79	50	100	69	101	64	91	56	90	57	82	59	98	63	82	58	97	63	103	78	106	74	95	74	89	76
2...	82	45	82	50	102	71	108	66	92	60	93	57	85	59	99	63	85	58	102	62	105	80	109	75	94	76	90	76
3...	79	48	79	50	101	70	103	78	90	58	80	57	84	62	99	73	80	60	102	62	104	82	109	79	94	76	88	77
4...	75	51	80	53	96	74	100	74	80	59	79	53	81	54	88	64	77	55	91	63	91	74	95	72	93	77	88	78
5...	76	44	77	48	93	66	91	66	84	56	83	54	82	59	87	63	73	55	89	60	99	74	103	71	95	77	90	78
6...	78	36	77	40	95	67	96	70	87	54	85	54	84	58	92	68	81	50	91	60	100	75	105	76	94	77	88	78
7...	80	37	83	44	94	66	98	66	86	54	92	57	85	57	95	65	83	58	97	61	100	77	103	74	93	78	89	79
8...	81	38	79	43	97	73	96	72	83	54	82	53	80	60	93	66	82	62	99	66	98	78	102	74	94	76	87	78
9...	75	40	77	45	94	67	98	68	84	56	75	57	80	56	93	66	79	58	90	63	102	79	104	76	93	77	89	78
10...	78	37	78	44	89	65	99	70	80	54	80	57	74	56	83	67	77	58	91	62	101	78	103	76	95	75	88	77
11...	76	45	78	43	95	69	101	68	84	57	84	55	82	56	88	68	78	56	92	63	98	76	104	72	95	75	90	77
12...	77	43	74	49	95	69	97	70	88	56	89	56	85	54	94	67	74	54	90	61	98	80	104	79	96	74	88	76
13...	79	41	76	50	99	66	101	68	86	55	89	55	79	59	93	64	81	57	95	63	105	80	107	79	96	76	90	77
14...	72	45	80	47	98	67	97	70	83	52	87	59	78	55	86	65	80	60	86	60	98	73	99	72	96	76	88	78
15...	81	41	79	44	90	69	101	69	84	58	85	54	78	56	93	66	81	58	92	63	93	72	106	68	95	75	87	77
16...	80	44	77	46	93	71	99	72	84	58	85	56	78	58	93	68	80	63	95	66	98	73	105	74	96	76	86	79
17...	78	41	78	44	95	72	101	73	81	55	85	58	83	54	94	70	82	55	94	64	98	76	97	76	96	76	86	77
18...	82	42	82	45	89	70	97	72	75	56	86	59	74	55	80	64	77	55	84	63	90	73	97	72	90	76	84	74
19...	83	43	80	44	89	68	88	71	78	57	88	57	76	57	86	69	80	54	89	65	81	70	90	71	90	70	87	76
20...	85	46	81	47	93	69	94	66	87	52	92	55	83	55	91	65	84	56	95	61	94	70	102	65	92	70	88	75
21...	86	43	79	46	100	66	102	65	88	55	95	58	86	59	95	64	85	58	99	62	101	74	106	74	96	74	92	76
22...	86	48	82	45	102	72	101	66	89	54	95	60	87	59	96	65	84	61	100	64	102	77	106	78	94	76	87	77
23...	80	45	82	54	100	73	101	66	90	56	83	60	84	59	96	63	83	59	98	64	102	79	106	76	95	76	87	77
24...	81	38	81	46	102	72	104	67	94	55	87	61	85	65	98	62	85	57	102	65	102	76	105	75	95	73	87	74
25...	78	35	76	40	87	70	102	62	83	53	86	51	73	57	80	56	69	51	86	53	87	69	92	70	93	72	88	78
26...	82	40	79	39	90	62	87	63	86	44	81	49	79	50	83	52	79	48	86	48	85	64	87	59	92	73	94	77
27...	82	40	83	40	97	64	100	63	88	50	85	57	83	58	94	61	83	55	99	55	95	64	102	61	91	74	88	78
28...	81	41	80	49	99	65	102	63	86	51	80	58	84	56	97	64	83	55	101	62	97	76	105	75	92	76	88	78
29...	82	50	78	48	96	68	100	65	86	50	68	57	70	51	95	64	81	56	99	63	96	74	98	74	90	76	86	78
30...	63	50	75	49	84	61	94	71	67	55	65	52	65	52	73	60	65	52	79	59	96	74	100	75	88	72	85	74
31...	72	39	70	41	88	62	94	63	73	51	68	50	69	52	78	58	70	50	74	52	95	69	96	67	86	72	82	73
Mns	79.1	42.7	78.7	45.9	94.9	68.1	98.5	68.0	84.4	54.5	83.9	55.9	79.9	56.7	90.6	64.3	79.5	56.2	93.0	61.2	97.2	74.6	101.7	72.9	93.1	74.9	87.9	76.8

Date.	Texas.																									
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	99	74	98	75	105	78	105	63	102	74	88	80	100	74	95	75	102	75	98	76	98	68	98	73	105	72	98	76
2...	102	76	101	75	106	80	109	65	104	84	87	80	101	75	96	75	104	75	97	76	103	66	100	74	107	83	100	74
3...	101	78	101	74	105	80	107	75	102	83	87	81	101	77	96	75	100	75	96	77	102	72	99	74	109	77	99	74
4...	98	78	93	71	103	80	99	73	93	80	88	80	101	77	96	75	99	72	96	77	83	65	96	76	84	70	97	75
5...	98	77	92	66	103	80	102	66	91	78	84	79	103	77	91	74	98	73	88	77	87	62	96	74	90	72	97	75
6...	98	76	95	73	104	80	104	74	97	78	88	80	100	78	93	75	100	72	94	74	91	63	97	76	98	74	98	76
7...	98	77	94	69	103	80	99	72	99	78	87	80	98	76	92	74	99	72	95	74	94	64	93	75	98	70	98	75
8...	98	78	95	73	105	80	95	72	97	78	88	81	101	74	95	75	101	72	95	74	95	62	97	75	97	74	97	75
9...	100	76	92	70	105	80	102	70	91	78	87	81	101	76	98	75	102	73	96	75	89	67	99	75	95	70	99	74
10...	99	76	91	66	104	80	98	71	94	72	88	81	101	75	96	75	98	75	96	76	85	64	99	74	86	70	100	74
11...	101	78	95	71	104	80	105	71	97	76	88	81	102	75	97	76	96	73	95	77	85	67	99	74	91	72	99	74
12...	102	77	94	75	105	80	107	74	96	74	88	81	101	76	98	76	100	74	92	77	93	66	100	76	88	75	97	78
13...	101	79	98	73	105	80	108	72	98	79	89	81	101	76	96	75	95	75	94	78	90	63	99	75	95	74	100	77
14...	101	79	93	73	105	82	101	74	99	78	88	82	101	73	97	76	98	75	97	77	82	67	99	75	96	70	101	77
15...	100	79	88	69	103	82	105	70	93	77	88	82	001	78	95	75	90	73	86	76	96	61	99	75	95	72	98	77
16...	100	79	90	69	103	82	102	72	96	74	87	80	100	76	93	75	99	71	93	74	96	65	98	76	100	73	97	75
17...	99	79	93	72	102	82	101	72	95	77	86	80	99	75	92	77	99	72	94	73	96	64	99	77	99	72	97	74
18...	99	78	89	71	97	80	97	73	95	79	88	82	97	75	92	75	99	72	92	74	82	64	95	75	94	72	96	74
19...	97	74	83	69	101	76	89	70	87	77	86	71	98	74	90	72	98	71	94	73	84	64	96	73	89	72	93	75
20...	100	76	91	68	101	80	99	63	98	74	87	79	100	74	94	75	100	71	95	74	91	62	97	75	97	68	96	72
21...	102	76	98	69	105	80	108	70	102	78	89	81	101	77	97	75	101	71	99	75	96	65	100	76	103	73	101	78
22...	102	78	100	72	105	80	104	74	103	81	89	80	101	77	97	76	102	72	98	76	97	64	100	76	106	73	101	76
23...	100	77	98	79	105	80	104	72	103	80	89	81	100	75	96	76	101	72	98	75	98	66	99	75	106	81	99	74
24...	99	76	100	76	104	78	106	73	102	78	90	81	100	73	96	76	102	72	99	76	99	62	98	72	105	75	99	73
25...	98	74	82	67	101	79	99	71	96	73	88	82	98	75	93	75	98	72	95	72	94	55	97	75	86	69	95	75
26...	96	70	89	65	101	79	102	59	83	68	90	79	95	77	93	75	94	72	84	69	82	50	94	75	84	62	89	70
27...	100	73	95	71	103	80	102	63	90	67	87	75	96	76	91	73	95	70	88	69	93	53	96	75	93	59	92	70
28...	99	76	96	72	103	80	102	70	95	74	87	76	96	77	90	75	98	69	94	72	98	65	99	74	100	71	96	72
29...	97	75	96	71	102	80	101	71	94	74	87	78	97	75	90	75	99	69	95	72	96	63	97	74	98	72	95	72
30...	97	73	87	67	99	76	97	70	97	75	87	83	96	75	92	75	99	70	94	72	92	60	96	74	99	75	95	70
31...	97	72	89	69	93	74	94	65	96	73	88	80	94	76	92	75	99	68	95	73	88	55	92	73	98	68	95	72
Mns	90.3	76.3	93.4	71.0	102.9	79.6	101.7	70.0	96.3	76.4	87.7	79.9	99.4	75.6	94.2	75.0	98.9	72.2	94.3	74.5	92.1	63.0	97.5	74.7	96.5	71.9	97.2	74.3

Climatological Data for August, 1910.

DISTRICT No. 9, COLORADO VALLEY,

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

The month was marked by heavy, local rains, an unusual range of temperature, and in the northern part of the district the lowest minimum temperatures of record in August. In Wyoming and parts of northwestern Colorado during the cold wave of the 25th and 26th hard freezing weather was general. In Utah, where the severity of the cold wave was less marked, the damage was confined principally to vine crops. A light frost was noted at Flagstaff, Ariz., on the 6th. Heavy rains at Baker, Utah, on the 11th, 12th, and 31st caused much damage to roads; at Silver City, N. Mex., on the 22d, a downpour, lasting half an hour, caused considerable damage; on the 30th, at Fairbanks, Ariz., heavy rains caused the San Pedro River to overflow its banks, sweeping the valley for 20 miles; railroads were washed out and farms devastated, and at Tombstone, Ariz., 3 houses were struck by lightning and burned. On the same date, but in the opposite part of the State, railroad tracks were washed out between Seligman and Ash Fork.

TEMPERATURE.

The mean of the 132 stations was 73.7°, or 0.6° above the normal. Notwithstanding this small departure, the greater part of August was very warm, the excess being materially reduced by several unusally cool spells. By subdivisions the means and departures were: Western Wyoming, 59.3°, ± 0°; western Colorado, 62.5°, −0.8°; eastern Utah, 71.2°, +0.6°; western New Mexico, 73.1°, +1.5°; Arizona, 81.8°, +0.9°; southeastern Nevada, 80.9°; The highest monthly mean was 96.0° at Casa Grande, Ariz., and the lowest, 46.2°, at Corona, Colo., elevation, 11,660 feet.

The 4th and 5th were cool over the greater part of the district, but during the remainder of the period up to the 17th the departures were generally small. From the 18th to 28th very high mean temperatures were noted daily, except on the 25th and 26th in northeastern Utah, northwestern Colorado, and western Wyoming. The closing days of the month were cooler than the normal. By subdivisions the extremes were: Western Wyoming, 94° and 15°; western Colorado, 100° and 15°; eastern Utah, 107° and 25°; western New Mexico, 105° and 38°; Arizona, 119° and 40°; southeastern Nevada, 111° and 34°.

PRECIPITATION.

The average precipitation for the 178 stations reporting was 1.69 inch, or 0.37 inch below the normal. A deficiency was noted on all watersheds, except the lower Colorado. In Nevada light showers fell on only 2 days, and in Wyoming on 3 days, while in Arizona and Colorado showers, also generally light, fell in localities every day except the 6th and 26th. In Utah and New Mexico conditions were somewhat similar as regards frequency of rainfall, though more local in character. By watersheds the means and departures were: Green, 0.88, −0.30; Grand, 1.48, −0.46; San Juan, 2.04, −0.62; Little Colorado, 1.66, −0.57; Gila, 2.09, −0.31; Mimbres, 1.15, −0.99; Colorado, proper, 1.44, +0.01 inch. The greatest monthly amount was 5.32 inches at Oracle, Ariz., and the least, a trace, at Las Vegas and Logan, Nev. The average number of days with 0.01 inch or more of precipitation was 7.

MISCELLANEOUS.

The percentage of sunshine was about normal in the southern part and above the normal in the northern part of the district. Grand Junction reported, 80; Durango, 78; Flagstaff, 67; Phoenix, 82, and Yuma, 94 per cent of the possible.

The mean relative humidity observed ranged from 69 per cent at Flagstaff to 39 per cent at Grand Junction.

LOWER COLORADO RIVER.

Engineer J. A. Ockerson has completed his preliminary examination of the conditions in the lower Colorado River, and will soon be ready to submit his report thereon to the President.

Engineer Ockerson, who is a member of the Mississippi River Commission, with headquarters at St. Louis, has had many years of experience in controlling floods in that stream. He was sent to the Southwest by the President, as his special representative, to propose a plan for the expenditure of the $1,000,000 appropriation recently made by Congress.

In his report, Mr. Ockerson states that the break in the Colorado is about 20 miles below the point where the Colorado has entered the channel of the Abejos, and is emptying into Volcano Lake. It is at the point where the Colorado leaves its old channel for the Abejos that the work will have to be concentrated. Below this point the old channel of the river is utterly dry for more than 50 miles. Mr. Ockerson further states that if the present course of the stream is unmolested, it will soon fill Volcano Lake, and overflow from there into the Imperial Valley.

In the meantime the matter of the beginning of the work is in the hands of the diplomatic departments of the United States and Mexico, but it is thought there will be no trouble, except that the Mexican Government would probably not wish to make any appropriation for the maintenance of the work, since the residents of the Imperial Valley only are the ones to be benefited.

FIRE FIGHTING IN THE CATALINA MOUNTAINS OF ARIZONA.

During the season just past, fire has exacted its toll in many of the mountains surrounding Tucson. The chief cause of these fires was probably the long protracted drought. In the case of the June fires, which proved so disastrous, especially in the Santa Catalina Mountains, an electrical disturbance, accompanied by little rain, is known to have caused 2 of the more serious fires. In these mountains there were 4 fires of independent origin in widely-separated regions, 2 on the east, and 2 on the west side. If the blazes due to escape from parent fires are added, some of the most dangerous of which were overcome in their incipiency, the number of fires burning at different times was at least 12 or 15. The total area burned is about 20 square miles, and the cost of vanquishing the flames and the total damage are estimated at $250,000. In the opinion of those best qualified to judge, the entire splendid forest cover of the Catalinas would have been burned had it not been for the valiant and untiring work of the forest rangers and their employees. The fire of largest extent, spreading from Oracle Ridge through many of the best protected canyons and gulches of the east side as far south as Kellogg Peak, and on the north invading Del Oro Canyon, was successfully checked by backfiring along upper Sabino Creek and southeastward along the main divide. Several fires escaping over this line were checked only by the hardest work. Four of the principal camps were almost touched by the flames. The best forest of the higher Catalinas, including the Mount Lemmon fir forest—the finest bit of true forest that southern Arizona affords—was saved from what threatened to be the severest burning in half a century, if not its total destruction. As dangerous as any, owing to the prevailing west wind, were the 2 fires that started on the west side of that mountain, but by an all-night's work spent upon each of them, they were conquered.

Along with the forest cover was saved the biological station of the Desert Botanical Laboratory, upon which a large sum of money has been expended.

TABLE 1.—*Climatological data for August, 1910. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Battle Mountain	Carbon	7,300																		U. S. Forest Service.
Daniel	Uinta	6,740	11	53.4	− 1.3	84	3	15	25	53	0.10	− 0.95	0.10	0.0	1	22	9	0	nw.	J. M. Van Dervort.
Eden	Sweetwater	6,577	2	61.2		89	19	22	25	56	0.23		0.11	0.0	3	11	17	3	w.	Eden Valley L. & I. Co.
do	do	6,083	5	67.0	+ 1.2	94	18	28	30	57	0.74	+ 0.12	0.30	0.0	4	18	11	2	w.	Geo. W. Maxon.
Green River	Fremont	7,167	4	55.6		89	1	15	26	67‡						15	6	0	nw.	U. S. Forest Service.
Pinedale	Carbon	9,232																		J. C. Fothergill.
Rambler	Freemont	7,500	2																	J. L. Allen.
Willow Creek Cabin																				
Colorado.																				
Ashcroft	Pitkin	9,483	8	53.8		77	21	28	25	42	2.23		0.44	0.0	16					Dan McArthur.
Bed Rock	Montrose																			W. B. Weybright.
Breckenridge	Summit	9,536	20	51.9	− 1.5	75	21	22	25	49	0.45	− 1.92	0.13	0.0	6	2	24	5	se.	Mrs. J. G. Thompson.
Cascade	San Juan	8,900	4								4.76		1.06	0.0	16	11	12	8		San Juan P. & W. Co.
Chromo	Archuleta	7,500	4																	Lawrence Nolan.
Cochetopa	Saguache	9,088									2.03		0.50	0.0	15	4	22	5	w.	Bessie McDonough.
Collbran	Mesa	6,000	17	67.2		88	21†	39	25	39	0.71	− 0.68	0.35	0.0	6	23	6	2	sw.	A. A. Wood.
Columbine	Routt	8,766									1.50		0.40	0.0	5	17	12	2	sw.	Mrs. M. A. Caron.
Columbine Ranch	Delta	6,925									3.99		0.86	0.0	15	12	3	16	s.	Geo. W. Wade.
Corona	Grand	11,660	3	46.2		60	3†	27	25	27	0.58		0.50	0.0	2				w.	U. S. Weather Bureau.
Crawford (near)	Montrose	6,600		67.0		86	3	41	25	38	1.52		0.46	0.0	11	16	13	2		C. W. Roe.
Crested Butte	Gunnison	8,867		54.4		80	21	25	26	51	1.27		0.40	0.0	8	13	10	8		Charles L. Ross.
De Beque	Mesa	4,935		76.4		100	19	43	26	52	1.50		1.10	0.0	2	21	8	2		C. M. Paine.
Delta	Delta	4,965	19	72.4	+ 0.1	98	30	38	26	56	0.37	− 0.59	0.18	0.0	5	27	1	3		E. M. Getts.
Dillon	Summit	8,800	1	62.6		82	20	22	26	55	0.15		0.08	0.0	3	20	7	4	nw.	Harry T. Hamilton.
Dolores	Montezuma	6,500	1																	Geo. R. Simmons, jr.
Durango	La Plata	6,534	17	67.3	+ 0.3	91	22	45	31	42	1.28	− 0.85	0.47	0.0	11	6	22	3	nw.	U. S. Weather Bureau.
Eagle	Eagle	6,598	5																	J. M. Witteman.
Eureka	San Juan	10,000	3								3.27		0.63	0.0	20					San Juan P. & W. Co.
Fraser	Grand	8,560		51.3		77	19	15	26	58	0.65		0.18	0.0	10	7	14	10	w.	L. D. C. Gaskill.
Fruita	Mesa	4,510	11	74.6	+ 1.3	98	21	43	25	45	1.18	− 0.01	0.63	0.0	3	11	14	5	w.	J. B. Willsea.
Gladstone §	San Juan	10,400	3								1.70		0.71	0.0	14	3	27	1	sw.	San Juan P. & W. Co.
Glenwood Springs (near)	Garfield	5,823	12	62.0	− 5.0	90	4†	33	25	50	1.07	− 0.47	0.30	0.0	5	25	6	0	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	19	76.8	+ 0.7	97	7	50	30	37	0.60	− 0.44	0.42	0.0	6	12	18	1	e.	U. S. Weather Bureau.
Grandlake	Grand	8,153	2								1.75		0.50	0.0	4	23	2	6		Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	18	71.4	0.0	98	18	38	26	55	0.88	− 0.12	0.52	0.0	8	23	6	2		David Evans.
Gunnison	Gunnison	7,670	17	58.8	− 0.9	84	7†	29	30	51	1.62	+ 0.29	0.47	0.0	11	4	27	0		Clarence Adams.
Horsefly	Montrose	8,700									2.48		0.63	0.0	8	9	18	4	sw.	L. J. Finch.
Ironton	Ouray	10,000									2.70		0.46	0.0	22	4	27	0	sw.	P. H. Foley.
Kremmling (near)	Grand	7,337	1	59.6		83	2†	26	26	54	0.73		0.18	0.0	13	7	16	8		H. A. Howe.
Lake City	Hinsdale	8,686	5	59.2		82	22	37	15†	41	2.73		0.37	0.0	21	4	21	6	s.	J. F. Maurer.
Lay	Routt	6,190	16	64.9	− 0.9	91	7†	21	30	62	0.22	− 0.69	0.10	0.0	4	18	11	2	sw.	A. G. Wallihan.
Leal	Grand	8,750																		L. J. Wade.
Lujane	Montrose	6,620	4	70.0		90	3†	44	25	41	0.74		0.47	0.0	7	16	14	1	se.	U. S. Reclamation Service.
Mancos	Montezuma	6,960	11	64.6	0.0	88	22	41	25†	43	1.26	− 1.35	0.66	0.0	7	4	25	2	sw.	B. M. Krumpanitsky.
Marble	Gunnison	7,951	1	59.4		83	3	30	25†	52	2.65		0.51	0.0	12	7	17	7	e.	Homer Harrington.
Marshall Pass	Saguache	10,846	7																	William D. Lillard.
Meeker	Rio Blanco	6,182	18	62.4	− 1.8	85	3†	29	25†	51	1.89	+ 0.31	0.53	0.0	10	9	16	5	sw.	T. Baker.
Montrose (near)	Montrose	5,811	21	64.4		93	18†	37	26	47	1.42		0.41	0.0	6	18	13	0		R. Butterfield.
Nast	Pitkin	7,953		55.8		78	3†	31	25†	47	1.55		0.33	0.0	7	19	10	2	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	19	62.3	− 1.3	88	18†	27	25	56	1.50	− 0.06	1.19	0.0	3	28	3	0		Shaw Brothers.
Pagosa Springs	Archuleta	7,108	3	62.4		91	22	36	6†	50	1.96		0.36	0.0	15	7	19	5		E. T. Walker.
Paonia	Delta	5,694	15	69.6		90	3†	46	25	38	1.58	+ 0.38	0.93	0.0	7	6	24	1	sw.	J. M. Underwood.
Parshall	Grand		1								0.63		0.16	0.0	5					F. A. Field.
Pitkin	Gunnison	9,500	1								2.06		0.72	0.0	11	11	16	4		Mrs. Maggie Cammann.
Rangely	Rio Blanco	5,050	11			96	7†				0.48	− 0.91	0.35	0.0	3	2	26	3	w.	Mrs. C. P. Hill.
Redcliff	Eagle	8,695	15								2.02		0.39	0.0	9	14	5	12		Dorothea Greiner.
Rico	Dolores	8,824	8								2.94		0.88	0.0	15	12	18	1	sw.	Clinton B. Smith.
Rifle	Garfield	5,437																		Horace Mann.
River Portal	Montrose	6,570	4	67.2		91	2†	41	25	49	0.84		0.35	0.0	7	12	12	7		U. S. Reclamation Service.
Sapinero (near)	Gunnison	8,125	8	58.3		81	22	32	26	46	2.14		0.38	0.0	12	16	11	4	w.	W. F. Irving.
Shoshone	Garfield	6,110		69.7		88	3†	48	26	35	0.84		0.38	0.0	6	7	20	4		Central Colo. Power Co.
Silverton (1)	San Juan	9,285	6	55.6		81	22	28	26	51	1.91		0.59	0.0	15				sw.	A. P. Root, jr.
Silverton (near) §	do	9,400	3	52.8		73	22	28	26	46	2.45		0.65	0.0	10	3	26	2	sw.	San Juan P. & W. Co.
Spruce Lodge	Grand	9,600	2								1.39		0.37	0.0	14					H. J. Wills.
Steamboat Springs	Routt	6,683	7	60.0		88	18†	20	26†	66	0.60		0.39	0.0	4	30	1	0		M. E. Houston.
Tacoma §	La Plata	7,300	3	63.4		88	21	42	24†	41	3.49		1.10	0.0	5	7	11	13	n.	San Juan P. & W. Co.
Terminal Dam §	do	8,300	3								2.18		0.76	0.0	13	16	13	2	s.	Do.
Terrill's Ranch	Mesa	7,000									0.88		0.45	0.0	6	18	11	2	sw.	A. F. Terrill.
Uncompahgre Plateau	Montrose	8,400									2.03		0.75	0.0	6	9	21	1	sw.	Martin Esser.
Whitepine	Gunnison	9,500	10	53.8		76	21†	32	6†	39				0.0		4	23	3	s.	C. E. Macy.
Yampa (near)	Routt	8,000	1								1.19		0.55	0.0	5	8	21	2	s.	Percy A. Hughes.
Utah.																				
Baker	San Juan	7,560	1								3.64		1.17	0.0	9	21	6	4	s.	Maude A. Palmer.
Basin	Grand	9,500	1								2.86		1.35	0.0	8	7	23	1	sw.	E. H. Wolf.
Castle Dale	Emery	5,500	11	65.1	− 2.3	94	6†	35	25	47	0.60	− 0.28	0.20	0.0	5	22	9	0		James Jeffs.
Elkhorn	Unita	6,657														9	8	14		Forest Supervisor.
Emery	Emery	6,260	10	66.3	+ 0.6	88	7	41	27†	44	1.35	+ 0.23	0.65	0.0	3	0	0	31	s.	H. C. Wickman.
Escalante	Garfield	5,700	10	67.8	− 0.9	91	6†	43	25	42	2.72	+ 1.13	0.75	0.0	11	10	0	21		Geo. H. Barney.
Fort Duchesne	Uinta	5,000	22	70.0	+ 0.6	98	7	35	30	51	0.61	− 0.11	0.45	0.0	4	24	1	6	w.	Post Surgeon.
Fruitland	Wasatch			62.6		91	10	25	30	53	0.84		0.34	0.0	6	12	18	1	w.	J. Peter Naab.
Grayson	San Juan	5,750	6																	Joseph A. Lyman.
Green River	Emery	4,080	13	79.9	+ 2.8	103	8	48	26	49	0.11	− 0.62	0.11	0.0	1	26	5	0		B. F. Miller.
Hanksville	Wayne		1																	F. J. Weber.
Hite	Garfield	3,000	11	84.5		106	21	61	5	39	0.58		0.27	0.0	5	14	15	2	s.	John P. Hite.
La Sal	San Juan	7,000	10	67.0[4]	0.0	87	21	45	5	35[4]	0.63	− 0.73	0.41	0.0	3	8*	16*	6*		Chas. L. Glassmire.
Loa	Wayne	7,000	18																	Michael Hansen.
Manila	Unita										0.99		0.40	0.0	8	12	19	0		Daniel M. Nelson.
Moab	Grand	4,000	21	77.4	+ 2.2	101	21†	45	26	52	0.78	+ 0.07	0.27	0.0	5	13	16	2		Henry Crouse.
Monticello	San Juan		2																	D. B. Perkins.
Orderville	Kane		1								1.31		0.43	0.0						F. A. Porter.
Price	Carbon	5,557																		H. C. Smith.
Ranch	Kane	6,700	9	63.4		86	7†	38	14	42	2.28		0.96	0.0	5	8	5	18	w.	J. W. Seaman.
Saint George	Washington	2,880	29	82.9	+ 2.2	107	7	53	15†	44	0.26	− 0.48	0.20	0.0	2	9	19	3		Joseph T. Atkin.
Scofield	Carbon	7,625	2																	O. E. Jorgensen.
Springdale	Washington		3	82.3		104	20	58	29	42*	1.20		0.80	0.0	4	13*	5*	12*		Hattie Flanigan.
Sunnyside	Carbon	5,280	5								0.42		0.25	0.0	7					Henry Cullum.
Teasdale	Wayne	7,000	2	66.3		87	3	45	30	32	1.69		0.48	0.0	12	7	5	19		Josiah Shurts.
Theodore	Wasatch	5,507	5	66.8		92	22	28	25	49	0.83		0.40	0.0	7	6	20	5		M. M. Smith.

TABLE 1.—*Climatological data for August, 1910. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Utah—Cont'd.																			
Tropic	Garfield	7,000	13	67.7	+ 1.9	92	21	42	15	44	1.45	− 0.02	0.56	0.0	5	9	19	3	sw.	E. P. Bolton.
Trout Creek Ranger	Unita	9,200									3.22		0.90	0.0	9	6	20	5		Forest Supervisor.
Vernal	do	5,050	15	69.0	− 0.8	96	21	34	30	48	0.72	+ 0.09	0.42	0.0	3	27	3	1		S. P. Trim.
New Mexico.																				
Alma	Socorro	5,500	14	77.4	+ 4.1	102	7	52	6	47	1.95	− 1.02	0.80	0.0	5	1	28	2	n.	M. A. Balke.
Aragon	do	5,856	3	64.2		90	21†	38	17	50	2.22		0.60	0.0	7	7	21	3		John R. Milligan.
Blackrock	McKinley	6,500	2	70.7		92	7†	48	17	40	0.97		0.42	0.0	4	0	31	0	w.	Wm. J. Oliver.
Bloomfield	San Juan	5,500	15	73.9	+ 0.6	100	21†	45	17	46	0.55	− 0.72	0.38	0.0	4	3	27	1	sw.	Fred Le Clere.
Cambray	Luna	4,215	11								0.91	− 0.53	0.73	0.0	3	11	16	4	e.	Southern Pacific Co.
Columbus	do	4,034	1			101	3				1.17		0.70	0.0	7	10	12	9	sw.	El Paso & Southwest. R.R.
Deming	do	4,333	33	78.5		105	24	50	26†	50	1.02	− 0.91	0.50	0.0	3	0	27	4	w.	Southern Pacific Co.
Dulce	Rio Arriba	6,767	3	66.3	+ 2.6	94	21	40	30	47	2.10	− 0.04	1.01	0.0	11	8	17	6	s.	G. H. Blakeslee.
Fort Bayard	Grant	6,152	35	73.8	+ 2.6	90	1†	52	1†	38*	0.90	− 1.97	0.40	0.0	3	15	16	0	e.	U. S. Gen'l. Hospital.
Fort Wingate	McKinley	6,997	46	68.6	− 0.8	93	2†	45	16	40	1.30	− 0.88	0.30	0.0	10	8	6	17	w.	Medical Corps, U. S. A.
Fruitland	San Juan	4,800	17	74.0	+ 1.0	98	22	46	17	44	0.48	− 0.16	0.30	0.0	2	14	17	0	sw.	Cyril James Collyer.
Gage	Luna	4,486	3	78.8		103	1†	50	25†	46	1.00	− 0.36	0.50	0.0	3	10	17	4	w.	Southern Pacific Co.
Gila (near)	Grant	4,470	11	78.0	+ 1.1	103	21	52	6	50	2.27	− 0.29	1.05	0.0	5					T. J. Clark, sr.
Gila Planting Station	do	6,475																		U. S. Forest Service.
Hachita	do	4,504	1								1.26		0.65	0.0	6	10	21	0	sw.	El Paso & Southwest. R.R.
Haynes	Rio Arriba	6,600									1.20		0.50	0.0	8	24	3	4	nw.	Dr. John Roger Haynes.
Hermanas	Luna	4,451	1								0.12		0.05	0.0	4	23	6	2	w.	El Paso & Southwest. R.R.
Lordsburg	Grant	4,245	10	81.5	+ 0.8	102	22	62	18†	36	0.87	− 0.66	0.87	0.0	1	6	22	3	sw.	Southern Pacific Co.
Luna	Socorro	7,300	5	65.2		88	7†	40	6	44	3.66		0.80	0.0	13	0	31	0	w.	C. B. Martin.
Mimbres	Grant	5,007	5								1.90		0.53	0.0	9	9	22	0	se.	Chas. Dennis.
Pratt	do	4,415	1								0.99		0.32	0.0	5	11	20	0	sw.	El Paso & Southwest. R.R.
Putnam	San Juan	6,200																		Miss Elenor L. Quick.
Redrock	Grant	4,150	5								0.84		0.30	0.0	5	4	26	1		Robert H. Woods.
Rodeo	do	4,118	1								0.58		0.29	0.0	7	22	8	1		ElPaso & Southwest. R.R.
Ross	Rio Arriba	6,000	5																	B. A. Candelario.
Arizona.																				
Allisres Ranch	Cochise	4,184	14								3.25	+ 0.23	0.97	0.0	7	9	16	6	nw.	Thos. Allaire.
Arizona Canal Dam	Maricopa	1,372	17	90.2	+ 1.6	108	26	69	30	35	0.74	− 0.71	0.32	0.0	6	6	17	8	s.	U. S. Reclamation Service.
Astee	Yuma	492	11	94.1	− 0.6	113	5	73	14	37	0.11	− 0.38	0.06	0.0	2	23	3	5	w.	Southern Pacific Co.
Benson	Cochise	3,523	30	81.8	+ 0.2	102	25	58	15	40	1.51	− 0.73	0.62	0.0	6	0	12	19	e.	Southern Pacific Co.
Bisbee	do	5,500	20	73.4	+ 0.7	89	22	57	30	24	3.22	− 1.56	0.82	0.0	13	18	9	4	e.	Rev. J. G. Pritchard.
Bonita	Graham	4,916																		A. Johnson & Co.
Bowie	Cochise	3,756	34	82.4	+ 3.7	105	7	60	29	38	1.69	− 1.10	1.03	0.0	3	8	20	3	sw.	Southern Pacific Co.
Buckeye	Maricopa	980	19	90.1	+ 2.6	113	26	61	14	48	0.78	− 0.06	0.27	0.0	4	25	6	0	s.	H. E. Kell.
Camp Verde	Yavapa	3,160																		T. R. Gabbard.
Canille	Santa Cruz	5,225	1								3.02		0.93	0.0	12	0	27	4	se.	R. A. Rodgers.
Casa Grande	Pinal	1,396	29	96.0	+ 4.8	115	19†	74	10†	36	1.05	+ 0.07	0.55	0.0	2	12	8	11	sw.	Southern Pacific Co.
Cave Creek	Maricopa	1,520	3	87.6		109	26	63	14	43	1.51		0.54	0.0	6	20	9	2		E. A. Howard
Chin Lee	Apache	6,090	2	73.4		95	7†	52	5†	41	1.53		0.62	0.0	10	8	13	10	sw.	Fr. L. Ostermann, O. F. M.
Chiarsons Mill	Graham	8,000	3	64.4		80	7	49	30	26	4.74		2.30	0.0	8	8	20	3		H. R. Chiarson.
Clifton	do	3,584	20	87.3		105	6†	68	30	30	2.65	+ 0.10	1.47	0.0	7	13	18	0		P. Reisinger.
Cline	Gila	2,300	11	86.8	+ 4.5	105	6†	65	6†	40	1.13	− 1.26	0.45	0.0	6	11	17	3	nw.	W. M. Clanton.
Cochise	Cochise	4,219	12	77.6	− 1.9	98	7†	55	14	38	3.55	+ 1.36	1.50	0.0	5	15	14	2	se.	Southern Pacific Co.
Columbia	Yavapai	1,900	10	90.6		110	21	70	30	31	1.59		0.65	0.0	5	3	23	5	se.	M. J. Nolan.
Congress	do	3,668	14	84.5	+ 1.1	100	6†	66	4†	27	2.39	+ 0.20	1.28	0.0	6	11	13	7	sw.	Congress Mine.
Courtland	Cochise	4,543	1								2.55		0.58	0.0	12	7	19	5	sw.	El Paso & Southwest. R.R.
Dos Cabezos	do	5,250	2	76.1		100	1	52	30	42	1.88		0.65	0.0	7	9	21	1	e.	N. Erickson.
Douglas	do	3,930	7	79.4		101	27	59	30	39	4.48		1.13	0.0	13	12	18	1	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204																		G. F. Cook.
Fairbank	Cochise	3,862	1								3.40		1.50	0.0	8	8	19	4		El Paso & Southwest, R.R
Flagstaff	Coconino	6,907	18	63.8	+ 1.0	85	7	44	17	39	3.74	+ 0.44	1.23	0.0	13	9	9	13	nw.	U. S. Weather Bureau.
Florence	Pinal	1,504	11																	Pacific & Eastern R. R.
Fort Apache	Navajo	5,200	39	73.6	+ 2.1	97	25	50	6	43	3.85	+ 0.43	0.80	0.0	13	5	25	1	sw.	Post Surgeon, U. S. A.
Fort Huachuca	Cochise	5,100	25	74.1	+ 0.2	97	12†	48	30	44	2.95	− 1.44	1.00	0.0	8	19	10	2	se.	Post Surgeon, U. S. A.
Fort Mohave	Mohave	604	37																	A. F. Duclos.
Gilabend	Maricopa	737	20	92.0	+ 0.3	116	5	70	9†	44	0.07	− 0.97	0.07	0.0	1	22	6	3	s.	Southern Pacific Co.
Globe	Gila	3,525	9	82.0		102	16	62	24	35	2.99		1.15	0.0	10	0	30	1	nw.	Dr. B. G. Fox.
Grand Canyon	Coconino	6,866	7	66.6		94	6†	40	18	47	3.83		1.10	0.0	16	5	20	6		Grand Canyon Ry.
Greer	Apache	9,200	6																	Mrs. M. Butler.
Hereford	Cochise	4,180	1								2.25		0.95	0.0	12	4	0	27	s.	El Paso & Southwest. R.R.
Holbrook	Navajo	5,069	20	77.7	+ 2.7	102	7	55	31	43	1.03	− 0.42	0.54	0.0	4	28	3	0	sw.	T. Larson.
Intake	Gila	2,230	5								1.45		0.95	0.0	3	7	18	6	sw.	A. J. Robinson.
Jerome	Javapai	4,743	13	78.2	+ 1.2	96	6†	62	12†	30	2.54	− 0.96	0.84	0.0	7	5	25	1	s.	Dr. L. A. Hawkins.
Keams Canyon	Navajo	6,600	7	70.5		91	21	50	31	38	1.71		0.74	0.0	9	6	18	7	se.	L. R. Ballard.
Kingman	Mohave	3,326	9	82.2		106	6	48	15	51	1.92		0.57	0.0	6	10	21	0	sw.	J. R. Gooding.
Lewis Springs	Cochise	4,029	1								1.96		0.54	0.0	9	0	26	5		El Paso & Southwest. R.R.
Maricopa	Pinal	1,186	33	92.3	+ 0.4	114	19	66	29	40	0.54	− 0.43	0.35	0.0	4	13	17	1	w.	Southern Pacific Co.
Mesa	Maricopa	1,244	16	86.4	− 1.0	106	17†	54	14†	50	1.88	+ 0.38	0.56	0.0	7	9	17	5	sw.	C. L. Diehl.
Mohawk Summit	Yuma	538	10	91.0	− 3.0	109	19	70	27†	37	1.26	+ 0.27	1.00	0.0	2	13	16	2	e.	Southern Pacific Co.
Naco	Cochise	4,579	1								4.31		1.12	0.0	11	4	26	1	w.	El Paso & Southwest. R.R.
Natural Bridge	Gila	4,990	21								2.46	− 0.72	0.48	0.0	10	10	18	3	sw.	D. G. Goodfellow.
Nogales	Santa Cruz	3,830																		Wallace & Summerhayes.
Oracle	Pinal	4,500	18	79.4	+ 2.8	94	16	62	29†	27	5.32	+ 1.62	2.64	0.0	7	5	22	4		W. H. Winters.
Osborn	Cochise	4,676	1								4.49		1.60	0.0	10	1	24	6	nw.	El Paso & Southwest. R.R.
Paradise	do	3,940	3	72.8		93	21	50	30	37	1.25		0.72	0.0	4	0	28	3	sw.	J. C. Hancock.
Parker	Yuma	345	13	95.2	+ 3.2	119	26	66	1†	45	0.31	− 0.65	0.22	0.0	4	14	15	2	sw.	Dr. H. V. King.
Payson	Gila	5,500	2	74.4		94	7†	51	6	42	2.26		0.55	0.0	8	9	14	8	sw.	M. McDonald.
Phoenix (1)	Maricopa	1,108	15	89.6	+ 0.6	107	5	69	30	31	0.14	− 0.82	0.09	0.0	2	11	17	3	w.	U. S. Weather Bureau.
Pinal Ranch	Pinal	4,520	16								2.71	− 0.64	1.18	0.0	6	11	16	4		Irion & Craig.
Pinto	Apache	5,660	5								1.01		0.33	0.0	6	18	11	2	sw.	Mrs. C. F. Henning.
Prescott	Yavapai	5,320	42	71.0	− 0.1	91	6†	49	14	37	2.03	− 1.16	0.45	0.0	10	14	12	5		Dr. J. W. Flinn.
Quartzsite	Yuma	800	3	92.6		111	5†	67	14†	42	0.73		0.47	0.0	3	18	8	5	w.	W. E. Scott.
Redrock	Pinal	1,856	3	91.8		110	15†	67	30	32	3.45		1.68	0.0	5	0	29	2	w.	W. J. Crowell.
Roosevelt	Gila	2,175	6	89.6		106	6	69	30	31	2.27		0.92	0.0	7	15	8	8		W. A. Schoenfeld.
Sacaton	Pinal	1,280	3	89.7		110	25	65	4	40	1.45		0.55	0.0	4	24	5	2		E. W. Hudson.
Saint Johns	Apache	5,650	9	73.2		99	2	48	17	44	3.00		1.40	0.0	6	3	11	17		A. Shreeve.
Saint Michaels	do	6,950	23	69.5	+ 2.3	91	21	46	26	41	1.04	− 1.50	0.48	0.0	5	14	0	17	sw.	Rev. A. Weber, O. F. M.
Salome	Yuma	1,875	3	86.1		108	9	62	29	38	2.31		1.26	0.0	5	19	6	6	sw.	Mrs. M. B. Swartz.
San Carlos	Gila	2,456	29	85.8	+ 1.5	111	7	62	6†	46	1.92	− 0.75	0.80	0.0	7	4	21	6	w.	F. S. Thomas.
San Simon	Cochise	3,609	25	82.9	+ 0.4	107	6	60	16†	44	1.48	− 0.12	0.50	0.0	5	13	13	5		Southern Pacific Co.
Seligman	Yavapai	5,219																		C. W. Dougherty.
Sentinel	Maricopa	685	12	94.6	+ 1.3	111	5†	73	14	36	0.05	− 0.38	0.03	0.0	2	6	22	3		Southern Pacific Co.
Showlow	Navajo	6,300	7																	Miss Zora Hall.

TABLE 1.—*Climatological data for August, 1910. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Cont'd.																				
Silverbell	Pima	2,650	5	86.2	.....	103	25	65	29†	29	1.85	.....	0.83	0.0	7	13	11	7	w.	Imperial Copper Co.
Snowflake	Navajo	5,644	1	72.4	.....	95	7†	49	17	44	1.45	.....	0.51	0.0	7	0	10	21	nw.	W. J. Flake.
Supai	Coconino	3,200																		C. E. Coe.
Tempe	Maricopa	1,165	6	89.0	.....	112	23	62	17	45	0.92	.....	0.25	0.0	7	15	13	3	nw.	F. H. Simmons.
Thatcher	Graham	2,800	7	80.2	.....	102	22	59	6	42	1.65	.....	1.05	0.0	4	9	22	0	w.	Prof. J. H. Larson.
Tombstone	Cochise	4,550	16	77.6	+ 1.8	97	25	53	29	33	4.05	+ 0.18	2.53	0.0	13	7	23	1	.....	F. N. Walcott.
Truxton	Mohave	4,197	1	79.6	.....	100	23†	59	3†	40	2.55	.....	1.35	0.0	12	9	21	1	w.	S. M. Atkinson.
Tubs	Coconino	4,500	11	74.4	− 0.8	97	6†	53	1†	44	0.34	− 0.51	0.10	0.0	8	5	21	5	ne.	G. H. Kraus.
Tucson	Pima	2,390	31	85.3	0.0	107	7	65	30	42	2.55	+ 0.12	1.73	0.0	9	0	29	2	w.	University of Arizona.
Vail	....do	3,421	12	84.8	+ 0.1	106	7	62	30	37	2.35	+ 1.37	1.90	0.0	8	9	19	3	.....	Southern Pacific Co.
Walnut Grove	Yavapai	3,649	20								2.24	+ 0.09	0.93	0.0	8	7	23	1	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	11	86.0	+ 1.1	106	6†	68	16†	37	1.95	0.00	0.95	0.0	4	17	11	3	.....	Santa Fe, Prese't & Phoenx.
Willcox	Cochise	4,164	30	73.8	− 4.7	98	25†	50	3†	45	1.09	− 1.44	0.42	0.0	4	5	0	26	sw.	Southern Pacific Co.
Williams	Coconino	6,750	11	68.9	+ 1.1	93	22	42	8	45	0.83	− 2.01	0.67	0.0	5	10	19	2	.....	E. J. Nordyke.
Winslow	Navajo	4,853	7	76.4	.....	103	7	53	31	46	2.52	.....	2.12	0.0	4	15	5	11	.....	J. F. Bauer.
Yarnell	Yavapai	4,700	12								4.35	+ 1.27	2.91	0.0	6	5	25	1	sw.	E. L. Bartholomew.
Yuma	Yuma	141	31	91.7	+ 1.6	113	26	64	14	43	0.18	− 0.17	0.11	0.0	2	31	0	0	sw.	U. S. Weather Bureau.
Nevada.																				
Caliente	Lincoln	4,407	...	72.8	.....	105°	8	34	15	64	0.40	.....	0.28	0.0	2	16	13	2	ne.	Agent Salt Lake Route.
Las Vegas	Clark	2,033	2	83.6	.....	110	23†	50	14†	59	T.	.....	T.	0.0	0	22	7	2	w.	Salt Lake Route.
Logan	....do	1,700	3	86.2	.....	111	6	56	16	47	T.	.....	T.	0.0	0	9	17	5	s.	Ray. M. Filcher.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 9, Colorado Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Battle Mountain	Snake																																
Daniel	...do	T.								T.	T.	T.	.10															T.				0.10
Eden	Green	.11											.02															T.	.10				0.23
Green River	...do	.16									T.	T.	.13								T.							.30	.15				0.74
Pinedale	...do																																
Rambler	Snake																																
Willow Creek Cabin	Green																																
Colorado.																																	
Ashcroft	Grand	.03	.03		.32	.22	.02		.03			.09	.23	.04	.12	.12	.30	.03	.01					.44	T.				.20				2.23
Bed Rock	Dolores																																
Breckenridge	Grand	T.	T.		.13		T.	T.	T.			.08	.03	T.			.08	T.				.03		.10				T.	T.	T.		0.45
Cascade	San Juan	.18			1.06	.08			.16	.81	.09	.20	.15		.48				T.		.29	.21		.22	.06				.01		.59	.17	4.76
Chromo	...do																																
Cochetopa	Gunnison				.15	.10			.20	.06		.05	.32	.15	.01		.04		T.	.05	.50			.05				.05	.20		.10		2.03
Collbran	Grand		.04		.04							.17	.35	.05	.06									T.									0.71
Columbine	Yampa		.40	.40					T.				T.	.23						.20			.30					T.				1.50
Columbine Ranch	Gunnison	.11	.14			.18	.14		T.	.32	.10	.33	.86				.12					.25	.55	.35	.05			.27			.22	3.99
Corona	Grand					.08	T.						T.		T.								.50									0.58
Crawford (near)	Gunnison				.10	.12	.01			.02		.46	.22	.12	.27		.02						.07					.11				1.52
Crested Butte	...do	.05			.20				.05				.40	.05	.12		.10			T.								.30				1.27
De Beque	Grand												1.10	.40																		1.50
Delta	Gunnison				.12	.03						.02	.18															.02				0.37
Dillon	Grand	T.								T.		T.									T.	.02	.08	T.	T.				.05	T.	T.	0.15
Dolores	Dolores																																
Durango	San Juan			.05	.45	.05				.01	.02	.01		.13	T.		T.				.22		.01	.05						.28		1.28
Eagle	Grand																																
Eureka	San Juan				.63		.09		.17	.08	.07	.17	.31	.08	.13	.09				.16	.31	.08	.13	.08		.09		.11	.13	.31		.05	3.27
Fraser	Grand	.18				.09	.02						.08	.02	.02							.12	.04	.03					.05			T.	0.65
Fruita	...do	T.			.63	.20			T.	T.		.35	T.				T.											T.				1.18
Gladstone	San Juan	T.			.71	.05		T.		.04	T.	T.	.03	.05	.02		T.	.03		T.	.17		.04	.22	.24		T.	T.		.03	.04	.03	1.70
Glenwood Springs (nr)	Grand	.07	T.									.30	.20							.20		T.						.30				1.07
Grand Junction	...do				.02	.02			T.			.42			.06					T.		T.		T.	.01			T.	.07				0.60
Grandlake	...do	.40			T.		T.	T.														.45	.40					.50					1.75
Grand Valley	...do	T.	.02		.02	.01			T.			T.	.52	.05	.06						.03	.17	T.	T.							T.	0.88
Gunnison	Gunnison	T.	.02	T.	.32	.03			.04	.03	T.		.47			.03							.28	.15	.10				.15				1.62
Horsefly	...do				.63	.45						.60	.30	.07							.03								.22			.18	2.48
Ironton	...do	.06	.05		.46	.23			.32	.05	.07	.29	.09	.07	.09		.04		.03	T.	.08	.02	.03	.22	.07			.23	.11	.02		.07	2.70
Kremmling (near)	Grand	.10			.10	.18		T.	T.		.06	.05	.07	.02	.04					.01		.03	.02	.01					.04				0.73
Lake City	Gunnison		.01	.01	.15	.37	.02		.12	.05	.26	.21	.30	.25			.04	.17			.12	.08		.10	.17				.19	.03	.01	.08	T.	2.73
Lay	Yampa	.08										T.	.10	T.						.03	.01	T.						T.	T.				0.22
Leal	Grand																																
Lujane	Gunnison				.14	.02			.01				.41	.06	T.		.03						T.						.07				0.74
Mancos	San Juan	T.		.07	.66	.19			T.	.10	.03		.05							T.	T.										.16	T.	1.26
Marble	Grand	.01			.41	.16	.23	.08	.11			.35	.39		.42	.09	.21							.19									2.65
Marshall Pass	Gunnison																																
Meeker	White								.08			.51	.53	.08	.17				.03		.20	.15		.01				.13				1.89
Montrose (near)	Gunnison										.30	.10	.37		.10									.14				.41				1.42
Nast	Grand				.31	.15						.13	.30				.18						.33			.15						1.55
Pagoda	Yampa												.15		.16						T.	1.19						T.				1.50
Pagosa Springs	San Juan	.29		.06	.36	.20			.02	.06	.01	.11	.13		.05		T.					T.	.35	T.	.03			.04			.12	.13	1.96
Paonia	Gunnison	.04		.09	.19					T.	.09	T.	.93	.04	T.		T.					.20											1.58
Parshall	Grand			.15		.16						.08									.08							.16					0.63
Pitkin	Gunnison	.21		.05	.72	.10						.05	.25							.05	.23	.14						.09	.17		T.	T.	2.06
Rangely	White				T.							T.	.05	T.							T.	.08						T.	.35				0.48
Redcliff	Grand	T.	.39		.20						T.	T.	.38	.29	.12	T.		.09				.14				T.			.22	.19			2.02
Rico	Dolores	.22			.88	.14					.40	.15	.10	.22	.01						.27	.17		.09	.01				.10		.10	.08	2.94
Rifle	Grand																																
River Portal	Gunnison			.04	.17		T.					.35		.03			.03											.12	.10				0.84
Sapinero (near)	...do	.03			.38	.36		.03	T.	.01	T.	.32	.33	.21	.02		.05					.29		T.					.11				2.14
Shoshone	Grand	T.			.02	.33			T.			.08	.30	.10							T.		T.						.01				0.84
Silverton	San Juan	T.			.59	.10			.05	.02	.06	.02	T.	T.	.15						.08	T.	.03	.19	.01			T.	.26	.05	.24	.06	1.91
Silverton (near)	...do	T.			.65	.05				T.	T.	T.	.30	T.	T.			T.			.06		T.	.15	.18			T.	.41	.07	.30	.28	2.45
Spruce Lodge	Grand	.04	.04		.15	.26			.06		.11	.01	.12	.04		.04				.03		.04		.37					.08				1.39
Steamboat Springs	Yampa												.39	.07	.10														.04				0.60
Tacoma	San Juan	1.10				.34																	T.							45	.65	.95	3.49
Terminal Dam	...do				.76	.58			.04	.08	.07	.09	T.		T.						T.	.07	T.		.06			.04	.02	.06	.21	.10	2.18
Terrill's Ranch	Grand				.05	.40						.28			.03									.01				.11			T.	0.88
Uncompahgre Plateau	Gunnison	.20			.75					T.		.35	.24				T.					.25						.24				2.03
Whitepine	...do																																
Yampa (near)	Yampa	.02			.13			T.			T.	.55	.29	T.				T.					.20										1.19
Utah.																																	
Baker	Colorado	.36		.07	1.10					.06	.06	.20	.48					T.			.56										.75	3.64
Basin	Grand				.44	.19	.07			1.35			.34							.25	.20	.02											2.86
Castle Dale	Green		T.	.20						.20												.12						.05		.03			0.60
Elkhorn	...do																																
Emery	Colorado								T.			.65	T.																.25				1.35
Escalante	...do	.25			.37	.03						.60	.05	.12						.75	.23	.15		.12							.05		2.72
Fort Duchesne	Green	.02	.45											.01								.13											0.61
Fruitland	...do	T.	T.	T.	T.			T.	T.	T.	.34	.02	.10	T.					.25	T.		T.	T.				T.	.10	.03				0.84
Grayson	San Juan																																
Green River	Green				.11			T.					*	T.																				0.11
Hanksville	Colorado																																
Hite	...do	T.		T.	.13							T.	T.	.05								.08	.27		.05								0.58
La Sal	Grand				.41						T.	.07	.15	T.						T.	T.		T.	T.				T.	T.				0.63
Loa	Colorado																																
Manila	Green	.05											.05		.02			.02		.20	.40	.05								.20				0.99
Moab	Grand				.27			.02				.27		T.							.07							T.				.15	0.78
Monticello	...do																																
Orderville	Colorado			T.	.04	.30						.12		.43									.32					.10					1.31
Price	Green																																
Ranch	Colorado			T.		.30		.09	.10	.83															.96			T.					2.28
St. George	...do											.20											.06										0.26
Scofield	Green																																
Springdale	Colorado				.20							.10											.80		.10								1.20
Sunnyside	Green	.07	T.	.02	.03							.25	.03		T.					T.		T.						.02					0.42
Teasdale	Colorado	.14	.07		.30			.03				.33	.15				.14			.08		.20	.09				.11					.05	1.69
Theodore	Green	.40	T.	T.								.10	.04	.11	.01					.08	T.	T.						T.	T.	.09				0.83
Tropic	Colorado	.56	.04	T.	T.				T.	T.	T.	.38	.40	T.						T.		T.	.07		T.			T.	T.					1.45
Trout Creek Ranger	Green	.40	.90			.09		.01				.25	.10		.50						.40	.60						T.						3.22
Vernal	...do	.25											.42									.05											0.72
New Mexico.																																	
Alma	Gila								T.										.23	.15						.80	.65	T.	.12				1.95
Aragon	...do		.60							T.	.05		.05						.50	T.		T.			T.	.20	.50				.32		2.22
Blackrock	Little Colorado			.15	.27					T.	.42									.13		T.					T.						0.97

TABLE 2.—*Daily precipitation for August 1910. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New Mexico—Cont'd.																																	
Bloomfield	San Juan		T.	T.	.38	.03				T.	.01	T.			T.		T.		T.		T.	.13	T.						T.	T.	T.	T.	0.55
Cambray	Mimbres				.13					.73																					.05		0.91
Columbus	Gila								.18	.70					.11			.03							.12					.02		.01	1.17
Deming	Mimbres									.20	.50																				.32		1.02
Dulce	San Juan	.05	.05	.03	1.01	.12			.05	.52	.01	.01	.24						T.		T.	T.		.01	T.				T.				2.10
Fort Bayard	Mimbres		T.		T.					.40						T.			T.		T.	T.	T.		T.					.35		.15	0.90
Fort Wingate	Little Colorado	.10	T.	T.	T.				.10	.30			T.			T.		T.	.20	.10	T.			.10	.10	.20	.20				.10		1.50
Fruitland	San Juan			T.	.30	T.				T.		.18							T.														0.48
Gage	Mimbres								.20	.30																					.50		1.00
Gila	Gila									T.	.32								T.					.25				.33		.32		1.05	2.27
Gila Planting Station	Mimbres																																
Hachita	Gila		T.	T.					.04	.11	.65	T.	T.					T.	.10					.23	.13							1.26
Haynes	San Juan		T.	.06	.36	.02			.06	.08										.02										.50	.10	1.20
Hermanas	Gila									.05						.01		.05							.01							0.12
Lordsburg	...do									.87																						0.87
Luna	...do	T.	T.	.10					T.	T.	.58		.27			.07	T.		.26	.80		.22	.28	.02	T.	.40	T.		.08	.50		.08	3.66
Mimbres	Mimbres	.11						.13	.11	.08	.53												.27	.28	.10						.29	1.90
Pratt	Gila									.05						.20									.12				.32		.30	0.99
Putnam	San Juan																																
Redrock	Gila										.25													.30				.23	.02	.04			0.84
Rodeo	...do		T.					T.	.01							T.			.29				.03		.10			.09		.05	.01	T.	0.58
Rosa	San Juan																																
Arizona.																																	
Allaires Ranch	Sonora		.10							.97		T.						.46				.21		.12					.42	.97			3.25
Arizona Canal Dam	Salt				.01			.18			.05									.32									.09	.09			0.74
Aztec	Gila										.05									.06													0.11
Benson	San Pedro							T.			T.							.08	.06	T.		T.		.40			.20	.15	T.	.62			1.51
Bisbee	...do	.18	.25	.19				.60	.02	.15				T.		.02	.03	T.	.17			T.	T.	T.	.82				.21	.30	.28		3.22
Bonita	Mimbres																																
Bowie	Gila									.42															.24				1.03				1.69
Buckeye	...do			T.						.25	.16	.10															T.			.27			0.78
Camp Verde	Verde																																
Canille	San Pedro	T.	.61	.03		T.		.12	.02	.28	T.	T.			.11			.12			T.				.15	T.	.30		.33	.93	.02		3.02
Casa Grande	Gila																.50													.55			1.05
Cave Creek	Verde									.15															.20		.10	.54	.15	.37			1.51
Chin Lee	San Juan	.16		.08	.11	.02				.05	T.	T.	T.					.33		.62	.05			T.	.05				T.		.06		1.53
Chlarsons Mill	Gila									.15	.25								2.30		.10							.12	.90	.91	.01		4.74
Clifton	...do		T.					T.			.20								T.	1.47					.36	.12		.28	.11		.11		2.65
Cline	Salt			.04							.24	.13	.02												.45					.25			1.13
Cochise	Desert			.15						.90									.70									.30		1.50			3.55
Columbia	Agua Fria				.65																			.20			.30			.22	.22		1.59
Congress	Hassayampa			.23							.05	1.28				.04				T.			.05				.74				T.		2.39
Courtland	White	.22	.51					.03	.07				.01	T.		.02		.09	.19					.58			.03		.55		.25		2.55
Dos Cabezos	Desert	.09	.47										.22						.18				.65		.10					.17			1.88
Douglas	Sonora	.12		.14				T.	.03	.54	.03	.17						.60	.17					.08	1.13				.99	.40	.08		4.48
Dudleyville	Gila																																
Fairbank	San Pedro			.10				1.50				22	.22									.02	T.		.16			.08		1.10			3.40
Flagstaff	Little Colorado	.17	1.16	.07				.01	.45	.01	.07	.91						.04			.05		T.	.55	T.	.07		.18	T.	T.	T.	T.		3.74
Florence	Gila																																
Fort Apache	Salt	.34	.10	T.				.70	.05	.22	.05					T.			.80	.08	T.				T.	.18	.60	.28		.30	.15		3.85
Fort Huachuca	San Pedro		.75	.50					.10		T.		T.			.20			.10				.10		.20				T.	1.00		2.95
Fort Mohave	Colorado																																
Gilabend	Gila										.07																						0.07
Globe	Salt			.24					.21			.02							.36	.01		.26			1.15	.04			.26	.44			2.99
Grand Canyon	Colorado	.12	.65	.01				T.	.22	.01	.14	.65				T.				.12			1.10	.04	.06	.19	.24	.04	.08	.16	T.		3.83
Greer	Little Colorado																																
Hereford	Gila																																
Holbrook	Little Colorado		T.																.14			.54							.32		.03		1.03
Intake	Salt			.20																					.30					.95			1.45
Jerome	Verde	.21		.10						10	.84	.80							.18											.31			2.54
Keams Canyon	Little Colorado			.25						.02	.44	.30					.22		.01	.06		.24							.17	T.	T.	T.	1.71
Kingman	Colorado			T.		T.				.47	.37	.14								.35	.02										.57		1.92
Lewis Springs	San Pedro		.15						T.	.31		.06	.05		.43		.03						.25	T.						.14	T.	.54	1.96
Maricopa	Gila			T.							.04					.03													.12	.35			0.54
Mesa	Salt		T.	.54				.56			.13	.10				.21			T.	T.							T.		.16	.18			1.88
Mohawk Summit	Gila								1.00																.26								1.62
Naco	San Pedro	.55	.15	.35				.45	.06	.27	.12								.28				32	1.12							.64		4.31
Natural Bridge	Verde		.22					.34	.05		.31									.34	.48			.37		.07			.22	.06		2.46
Nogales	Santa Cruz																																
Oracle	San Pedro					T.			1.17	.86						T.		.06	.34	.08					.17		T.		2.64			5.32
Osborn	...do	1.03	.22						.43	.04	.07						.23						.30	1.60					.02	.55			4.49
Paradise	Desert	.03									.30	.72							.20												T.		1.25
Parker	Colorado										.04	T.												.02		.22	.03						0.31
Payson	Verde		.23	T.				.48	.18		.22		T.						.12	T.		T.			.23	T.	T.			.25	.55		2.26
Phoenix	Salt		T.	T.				T.		T.	T.	T.				T.			T.								T		.05	.09			0.14
Pinal Ranch	...do										.29		.05							.18	.93							.08			1.18		2.71
Pinto	Little Colorado					.30				.33				.23		T.						.12			.01				.02				1.01
Prescott	Hassayampa		T.					.45	T.		.28	.20	.05							T.	T.		.08			.10	.45	.05		T.	.22	.15	2.03
Quartzsite	Colorado											.21															.47	.05					0.73
Redrock	Santa Cruz		T.					T.	T.	.70	T.					.12			T.				T.		.07		.88			1.68			3.45
Roosevelt	Salt		.14	T.					.82	.10									.17	.14					.65			T.		.25			2.27
Sacaton	Gila								.30			T.	.40			T.	.20													.55			1.45
St. Johns	Little Colorado		.55															.50		.22			.15							1.40		.18	3.60
St. Michaels	...do	T.	.48	T.	T.			T.	T.	T.		.17					.26		.03	T.			T.							.10		T.	1.04
Salome	Colorado			.25					.11			.35											.34							1.26			2.31
San Carlos	Gila	T.	.20	T.		T.			T.		.35	T.							.12	.09								.15	.21	.80			1.92
San Simon	...do			.12						.36								.50				.25									.25		1.48
Seligman	Verde																																
Sentinel	Gila								.02											.03								T.					0.05
Showlow	Little Colorado																																
Silverbell	Santa Cruz			.10				.59							.08	.18			.02							T.			.05	.83			1.85
Snowflake	Little Colorado				.10				T.	.12	T.	T.				T.		.21	.51			T.		T.	.18	.23	T.	T.				.10	1.45
Supai	Colorado																																
Tempe	Salt			.25					T.	T.	.06		.19			.01			T.	T.							T.	.25	.06	.10			0.92
Thatcher	Gila								.01		1.05								.41					T.					.18				1.65
Tombstone	San Pedro		.11					.25	.13			.10	.01					.08	.04			.03		.26		.07	.06		38	2.53			4.05
Truxton	Colorado							.16									.02	.08	.04	.12		.08	.09	.08	.02		.10			1.35	.41		2.55
Tuba	Little Colorado									.05			.05					.06		.03			.02	.01	.02					.10			0.34
Tucson	Santa Cruz							.28		.06	T.						.02			.33			.04				T.	.02	.05	1.73	.02		2.55
Vail	...do			T.				.12		.03	T.					.03				.12			.03					.04	.08	1.90			2.35
Walnut Grove	Hassayampa			.20						.66	.27	.33											.07				.45			.15	.11	T.	2.24
Wickenburg	...do		.95									.40																	.20		.40		1.95
Willcox	Desert		.12							.25															.42					.30			1.09
Williams	Colorado			.10							.67													.01			.03					.02	0.83

TABLE 2.—*Daily precipitation for August, 1910. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Arizona—Cont'd.																																	
Winslow	Little Colorado										T.	1.52	.60							.24							.16			T.			2.52
Yarnell	Hassayampa			.22								.30	2.91							.10										.20	.62		4.35
Yuma	Colorado																			.11										.07			0.18
Nevada.																																	
Caliente	Colorado											.12												.28									0.40
Las Vegas	....do											T.															T.						T.
Logan	....do					T.						T.												T.									T.

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George (Experiment station).		Fort Bayard.		Fort Wingate.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	80	42	88	54	85	52	92	67	78	58	80	40	80	52	85	55	92	55	101	79	96	64	103	73	90	52	80	58
2	75	37	87	51	87	52	93	68	80	43	83	39	80	40	82	55	91	55	102	73	99	62	103	69	85	56	93	54
3	84	32	89	49	85	54	95	66	80	41	85	40	86	36	85	50	91	53	95	73	100	59	94	68	88	56	85	58
4	80	35	83	49	69	54	74	64	66	50	76	45	83	35	82	53	79	53	90	67	77	66	98	68	86	53	80	57
5	75	32	86	52	70	52	83	62	61	47	82	49	81	46	87	59	87	47	93	61	90	60	100	60	88	55	78	56
6	80	26	89	47	84	48	92	60	72	49	82	38	83	32	83	46	93	46	102	63	96	54	105	66	.....	66	77	63
7	76	37	90	45	86	48	97	67	84	36	85	50	87	34	88	56	98	48	104	67	100	58	107	67	.....	64	90	50
8	75	30	87	46	86	50	97	72	80	35	85	51	84	48	87	51	97	50	102	71	98	58	104	69	.....	68	88	61
9	80	32	88	53	78	50	89	67	78	32	83	40	83	32	78	52	94	46	101	74	98	63	101	69	.....	66	83	61
10	76	33	89	50	82	51	92	67	79	38	82	42	86	38	79	50	94	50	101	73	98	63	98	64	.....	62	78	55
11	80	35	90	50	81	56	85	64	74	32	84	46	83	40	76	51	90	57	95	75	98	66	89	75	88	61	93	53
12	72	40	84	55	82	54	85	63	72	36	78	55	84	37	71	46	87	58	96	69	91	64	96	63	89	61	82	56
13	72	32	85	56	84	52	88	64	76	40	76	46	77	41	82	49	86	54	98	67	92	61	98	63	88	59	83	57
14	73	35	83	48	85	51	91	62	77	42	75	48	79	46	80	42	86	51	99	69	95	60	99	58	90	62	85	55
15	76	34	86	47	86	47	92	64	75	41	82	46	83	35	81	45	89	46	99	63	96	52	99	58	82	58	84	59
16	78	28	90	54	81	51	85	62	79	42	79	41	81	33	83	50	91	47	95	68	92	59	96	53	88	61	80	45
17	75	30	88	49	84	46	88	59	76	41	81	41	83	33	81	52	91	50	97	67	94	52	100	56	90	64	82	55
18	82	35	94	56	86	48	94	62	82	40	82	40	88	33	82	50	95	48	103	68	99	54	104	55	86	60	82	54
19	81	34	92	55	87	57	92	65	80	40	83	46	88	36	81	52	92	50	99	73	98	62	103	72	85	60	79	52
20	80	40	89	59	82	54	91	69	79	44	82	48	86	46	80	50	94	53	101	81	96	63	103	72	87	58	82	54
21	82	34	92	59	90	55	95	68	84	46	82	48	85	45	83	53	97	61	106	70	101	61	104	73	89	62	89	56
22	78	25	90	46	91	55	95	68	82	44	83	54	88	39	87	49	93	55	104	71	101	62	104	68	88	64	85	57
23	76	25	90	54	86	58	92	68	77	48	82	50	83	39	87	59	97	54	100	70	99	67	103	66	87	62	87	52
24	58	28	79	47	88	53	96	67	77	44	84	47	84	42	81	52	92	50	104	79	98	60	105	69	85	61	80	59
25	68	15	75	30	88	51	84	51	80	36	73	29	77	21	80	50	82	37	94	67	98	50	99	62	88	67	84	50
26	72	22	86	29	87	45	91	55	81	30	83	32	86	20	82	53	89	38	101	63	97	45	105	69	86	63	83	51
27	78	35	84	40	86	48	91	62	79	34	82	41	83	35	85	41	92	50	100	71	96	53	99	72	87	67	81	57
28	72	33	82	40	84	52	86	68	75	36	82	52	77	47	86	50	90	50	99	73	96	58	103	71	88	62	80	54
29	63	35	70	46	81	51	91	65	80	30	81	53	82	42	85	46	88	45	100	76	96	65	99	67	86	52	76	53
30	70	19	76	28	72	52	87	50	79	29	76	29	80	20	83	41	81	35	96	64	91	50	94	53	84	52	72	52
31	72	23	81	32	75	45	83	58	76	33	77	34	79	26	85	46	90	44	95	71	92	61	95	62	86	58	76	54
Mns	75.5	31.4	85.9	48.2	83.2	51.4	89.9	63.7	77.7	39.9	81.0	43.9	82.9	37.1	82.5	50.1	90.6	49.5	99.1	69.9	95.7	59.1	100.3	65.5	87.1*	60.4	82.5	54.7

Date.	Arizona.																						Logan, Nev.	
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carlos.		Tucson.		Yuma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	85	65	78	49	90	58	90	48	111	66	105	80	87	58	84	59	105	72	98	72	108	76	108	71
2	84	63	80	50	90	55	88	48	111	66	104	80	88	65	86	55	108	70	100	76	108	78	108	70
3	84	62	74	50	90	58	88	48	113	73	104	77	82	59	82	59	105	70	100	75	108	77	98	73
4	85	65	73	49	87	56	86	46	109	80	102	71	89	56	80	54	104	67	101	71	109	78	101	67
5	84	67	80	46	88	54	90	48	116	80	107	76	87	50	81	51	106	67	102	69	110	73	104	67
6	87	69	83	44	91	50	94	52	114	82	106	78	91	55	88	48	108	62	102	71	108	75	111	64
7	86	63	85	48	95	56	92	52	114	82	103	78	90	55	90	58	111	68	107	65	106	80	110	66
8	79	63	79	50	87	60	94	50	107	81	97	77	85	54	90	62	109	72	86	74	105	81	107	71
9	79	61	76	54	85	60	86	52	109	78	101	81	82	57	88	63	101	70	97	71	104	79	104	71
10	80	63	74	57	82	62	86	50	105	84	92	79	76	61	83	57	93	64	93	72	102	81	103	72
11	82	61	70	57	85	56	85	48	106	81	99	76	79	58	83	57	100	67	96	70	104	78	96	75
12	82	65	75	49	87	58	86	48	109	84	100	76	81	55	83	53	101	71	98	73	106	77	101	65
13	84	65	77	50	89	58	84	44	109	82	103	78	84	54	83	55	104	72	100	70	109	75	103	64
14	83	63	77	44	90	58	86	42	109	85	104	73	85	49	85	55	106	68	102	68	107	64	105	60
15	82	65	78	46	91	55	86	42	110	86	105	74	86	50	85	55	106	65	101	71	108	66	103	60
16	81	61	75	49	88	61	88	41	108	83	101	74	84	61	79	57	102	67	97	68	107	74	100	56
17	86	63	79	44	93	59	86	42	110	80	105	75	88	54	84	47	107	67	102	69	109	68	103	57
18	82	62	77	51	88	64	84	40	114	81	105	81	86	57	83	51	102	72	104	66	110	80	108	62
19	83	66	75	54	86	60	84	42	114	83	106	78	87	56	81	54	102	69	101	76	110	78	107	70
20	86	66	81	50	91	56	86	42	111	82	103	80	87	60	86	56	106	68	101	75	103	78	107	74
21	86	66	82	54	95	58	88	43	114	78	105	82	89	60	91	54	108	76	100	73	108	79	107	73
22	89	66	80	52	94	57	86	42	111	80	101	84	80	62	87	60	102	72	98	75	104	79	107	75
23	87	63	81	47	95	58	86	44	110	82	102	80	89	53	87	55	104	70	99	77	104	80	107	73
24	83	61	79	50	94	58	88	42	113	78	103	82	88	63	84	59	104	72	100	77	108	78	110	74
25	87	64	80	56	97	54	86	44	118	80	106	77	91	59	89	55	108	67	105	71	111	79	105	75
26	84	64	79	50	94	50	90	53	119	78	107	83	89	57	87	46	101	69	105	80	113	78	109	70
27	86	66	78	54	93	58	92	56	113	80	104	76	85	57	83	49	105	68	101	74	111	77	105	73
28	82	63	78	48	92	57	86	46	111	78	100	78	85	61	80	55	103	62	99	75	107	78	105	66
29	77	62	73	51	90	56	84	44	107	74	87	72	81	61	83	55	90	67	92	65	100	72	105	59
30	75	57	74	53	85	54	81	44	103	80	94	69	82	54	76	54	93	63	88	63	100	74	96	70
31	81	61	76	45	85	51	88	46	109	78	100	72	81	51	80	52	97	66	95	69	104	76	97	63
Means	83.3	63.6	77.6	50.0	89.9	57.2	87.2	46.1	110.9	79.6	102.0	77.3	85.3	56.8	84.2	54.8	103.3	68.4	99.0	71.6	106.8	76.4	104.5	67.9

Climatological Data for August, 1910.

DISTRICT No. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The temperature for the district had averaged higher than normal for every month from March to July, inclusive; but during August it averaged below normal. Some very low temperatures were reported during the last decade, and killing frosts were recorded at many stations. The precipitation was much below normal.

TEMPERATURE

The average daily temperature for August was about 1.8° below normal, or 68.2°, and ranged from 76.2° at Oak City, Utah, to 54.2° at Truckee, Cal. It is probable that a higher mean temperature than 76.2° was experienced at Jean, Nev., but the record there for the month was somewhat broken, and therefore not available for comparison.

The greatest minus departures occurred in central Nevada, and the greatest plus departures, which, however, were small, in the southern portion of the Utah area.

The warmest portion of the month was during the first two decades, especially in the Utah area. The maximum temperatures for the month occurred on various dates, many stations reporting these data in the early part of the month, while others reported them as occurring during a warm period extending from the 17th to the 23d. The highest temperature reported was 106° at Jean, Nev., on the 4th and 5th, the next highest being 102° at Carlin, Nev., on the 7th, and at Corinne, Utah, on the 9th and 19th.

On the 25th very cool weather prevailed in the eastern portion of the district, when frosts were widespread and much vegetation was killed. However, there were no reports of serious losses, as the staple crops were pretty well gathered at that time. In Nevada the coolest weather occurred after the 27th. Frost formed in some localities, but in the agricultural districts it was too light to injure vegetation. Forty-five stations reported temperatures of 32° or below, the lowest being 20° at Truckee, Cal., on the 25th, at Carlin, Nev., on the 29th, and at Woodruff, Utah, on the 30th. The daily ranges in temperature during this month were particularly large, the greatest being 75° at Carlin, Nev.

PRECIPITATION.

For the district as a whole the monthly rainfall averaged 0.39 inch, which was 0.31 inch below normal. Very nearly every station reported amounts below normal; and of those whose monthly rainfall exceeded the normal amount, the excesses were small. Precipitation was showery, though the precipitation chart shows a comparatively equable distribution of moisture. The largest amounts fell in the southern portion of the Utah area and in the extreme southern portion of Nevada. Many stations in Nevada and in the Oregon area reported no rain. The largest monthly amount was 2.36 inches at Beaver, Utah, and the greatest 24-hour amount was 0.95 inch on the 11th at Pinto, Utah.

In Utah and Idaho most of the rain occurred from the 9th to the 13th, but numerous showers also fell at scattered stations during the first three days of the month and from the 19th to the 27th.

MISCELLANEOUS PHENOMENA.

Sunshine was abundant. At Salt Lake City, Utah, 73 per cent of the possible amount was recorded.

For the district there was an average of 21 clear, 7 partly cloudy, 3 cloudy, and 3 rainy days.

In the Utah area a general smoky condition due to forest fires was observed. The smoke came from the north, began about the 25th, and extended as far south as the middle of the State.

NOTES.

A true and liberal meaning of conservation as applied to our natural resources has not always been made quite clear. The article following, by Governor Spry, of Utah, attaches to the term a broad economic significance, and in it he has referred generously to the work of the U. S. Weather Bureau, and especially to the use made of the statistics of the Climatological Service. The application of these statistics has indeed changed the definition of a desert so interestingly told in a following article by J. Cecil Alter. Many who read this article will remember how, not very long ago, the term was applied to whole territories. But now by improved methods of agriculture, carried on by the irrigation and dry farmer, a great portion of the so-called desert has or will rapidly disappear.

RELATION OF THE WEATHER BUREAU TO THE CONSERVATION OF OUR NATURAL RESOURCES.

By Gov. WM. SPRY of Utah, Salt Lake City, Utah.

Of the many national problems brought conspicuously to the public notice in recent years, none has aroused such widespread interest and discussion and searching investigation as the problem of the conservation of our natural resources.

In the broad meaning of conservation, as applied to the nation's resources, an almost limitless field for cooperative action on the part of our citizens has been opened. Conservation which means not only the preserving of our natural resources, but their development and prudent and provident use, finds almost unanimous support. In many instances the consumption of our resources necessitates the activities of development and growth; and development and growth are better than conservation and preservation. Conservation aims at the estoppal of wanton waste; it str.kes at the "skimming over" process which has held sway in the destruction of so many of our valuable resources; it aims to preserve for the public use and benefit the great natural assets of the nation as against their monopolization by the favored few; it has in view the restoration, so far as possible, of such of our resources as have been pillaged by the unscrupulous, and destroyed because of a lack of proper safeguards that have been made necessary by the changed conditions resulting from increased population and growing demand. In a word, the conservation movement means care, discretion, frugality, and judiciousness in the handling of our resources as against improvidence, prodigality, and wastefulness.

In the sense that conservation is development, the maintenance and upholding of the conservation policy is peculiarly within the province of the Weather Bureau. Precipitation, prevailing winds, temperature—these are all important considerations in the restoration of forest growth, and the controlling factors in the production of crops to serve and conserve the useful purposes and needs of man.

In the reclamation and development of the arid areas the Weather Bureau statistics furnish a substantial and sure basis upon which capital and energy can be invested. Warnings as to extreme weather conditions that endanger fruit crops, as furnished by the Bureau, are invaluable to the horticulturist. As the scope and purposes of the work of the Weather Bureau are more thoroughly understood, I am convinced that its reports and forecasts will be more generally followed as a guide in the development and conservation of our natural resources.

WHAT IS A DESERT?

By J. CECIL ALTER, Observer, Salt Lake City, Utah.

The general idea of what a desert is has undergone a great change in the comparatively recent past, due largely to man's increasing acquaintance with the means of utilizing the arid regions.

It is within the memory of many men when the western portions of the Dakotas, Nebraska, Kansas, and Oklahoma presented to the inexperienced settler such meager agricultural possibilities as to have received the title "desert plains."

The climate of this region has not changed one way more than another since then, but the region generally is now fenced, with farm against farm; and where once only the foxes had holes for weather protection, there are now seen occasional rectangular forests and miles of trees in rows sheltering prosperous homes, which are surrounded by broad fields of grain.

Time was, and that quite recently, when, through lack of familiarity with arid farming methods and of a knowledge of the amount of precipitation, the population of the Great Basin States saw the "desert" begin where the last stream of irrigation water was absorbed.

To-day we find the so-called arid farmer in practically every valley within team-travel distance from centers of supplies.

Just two forces have contributed to make these grain fields possible in the untried "desert" regions beyond the natural limits of the irrigation systems:

First, the general tendency of the irrigator to conserve his water by every possible means; to grow a crop with the least possible water (because it is expensive); and, second, as he determined the gradually lessening amounts of water that would mature his crops under varying improved methods of irrigation, the U. S. Weather Bureau, by scattering rain gages and securing accurate precipitation data, showed him just where to make his inroads on the "desert."

Even in places so desolate that rainfall observers can not be obtained the "desert" has "given itself away" by the production of heavy growths of sage brush, which, when compared with the vegetation growths where precipitation records are available, reveal its possibilities.

It is true that irrigation has taken many miles from the maps of so-called deserts, but these are probably no more than one-tenth of the area that now appears to be susceptible of reclamation by other methods.

The term, desert, ages ago, was applied quite widely to "any wild, uninhabited region, including forest lands."

A later, but still old, definition of desert is "a place unfitted to be the site of great commercial and industrial communities."

Other conceptions of what constitutes a desert are "an uninhabited, and uncultivated tract of country;" "uninhabited, unpeopled, desolate, lonely;" "uncultivated and unproductive, barren, waste;" "a desolate, barren region, waterless and treeless, and with but scanty growth of herbage;" "most of the valleys of the Great Basin are utter deserts."

Since the going of the U. S. Weather Bureau into the "barren and waste places" with rain gages, we find this definition in a new encyclopedia: "The line of 10 inches annual rainfall may be taken as roughly bounding the outer limit of desert conditions, and the 5-inch line as the marg n of the desert."

But even this definition needs modification and is open to many objections, for "desert conditions" will admit of growing profitable crops of wheat by proper conservation of moisture, as has been demonstrated. Moreover, there are instances throughout the entire arid west of the reclamation of land, by irrigation, that receives less annual precipitation than so-called purely desert regions, that is, less than 5 inches of rainfall annually.

For instance: In the Grand Valley, Colorado, around Grand Junction, the famous fruit district, the average annual precipitation is 8.30 inches, considerably less than the limit of "desert conditions." To the west, in the Green River fruit district in Utah, with average annual precipitation of only about 5.40 inches, and occasional years with but little more than 3 inches, the irrigator has made the land worth thousands of dollars an acre, and that in a region very scantily covered, naturally, with even sage brush.

Another new district that is yielding large sums per acre every year in fruit and vegetables as a result of irrigation is Moapa, Nev., which, according to a liberal interpolation from surrounding stations, certainly receives less than 5 inches of precipitation annually, and in dry seasons may be expected to pass an entire year with less than a single inch of rainfall.

Irrigation and education does it.

In all definitions of the dreaded desert, generally, there appears a sense of abandonment, or hopelessness, and as such, the true desert must practically disappear from the United States, receding to Death Valley, Cal., and not appearing again this side of the Old World. It is being more properly recognized that the true desert is a place of drifting sand, not held by vegetation, but driven by fiercely hot winds, above which clouds are rarely seen, and from which it is a difficult journey to permanent water supplies.

As men slowly work their way over the American plains, guiding their irrigation streams through the sage brush, imprisoning moisture in the soil in ingenious ways, and scattering homes along the ever receding horizon, "the wilderness and the solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose."

TABLE 1.—*Climatological data for August, 1910. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																			
Border	Uinta	6,085	7	60.8	+ 0.3	90	19†	20	25	61	0.15	− 0.96	0.15	0.0	1	23	7	1	w.	S. W. Condron.
Cokeville	do	6,204	0	58.2[c]		88	19†	21	25	57[c]	0.18		0.10	0.0	2	26[b]	3[b]	0[b]	w.	E. J. Tuckett.
Evanston	do	6,860	13	60.0	− 1.1	84	18	25	30	50	0.68	− 0.30	0.33	0.0	4	26	5	0	sw.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake		3								0.53		0.45	0.0	2	29	2	0		F. W. Boehme.
Grace	Bannock	5,400	4	65.4		91[a]	8†	26	25	49	0.36		0.12	0.0	4	16	9	6	s.	Cyril B. Dickson.
Oxford	do	4,750																		Edwin Smith.
Paris	Bear Lake	5,946	16			88		22			0.95	+ 0.04	0.90	0.0	3	28	3	0	w.	John Norton.
Stone	Oneida	4,520																		Thos. W. Roe.
Weston	do	4,460	13	65.9	− 1.0	93	21	26	25	50	0.79	− 0.30	0.33	0.0	3	25	6	0	sw.	Wm. Chatterton.
Utah.																				
Alpine	Utah	4,900	13								0.80	− 0.63	0.40	0.0	3	21	7	3		George Stevens.
Annabella	Sevier	5,250	5																	J. W. Fairbanks.
Beaver	Beaver	6,000	7	69.4		88	17†	40	30	38	2.36		0.75	0.0	11	13	16	2	sw.	James Connell.
Black Rock	Millard	4,872	10	70.8		95	6†	31	30	55	0.71	− 0.17	0.54	0.0	3	9	20	2		W. D. Livingston.
Blacksmiths Fork	Cache		1																	Forest Supervisor.
Card Canyon	do		1																	Do.
Castle Rock	Summit	6,244	7																	David Moore.
Cedar City	Iron	5,750	5	72.4		91	2†	43	30	42	1.37		0.35	0.0	6	4	20	7	s.	Parley Dalley.
Corinne	Boxelder	4,240	40	73.9	− 0.5	102	9†	38	25	53	0.00	− 0.57	0.00	0.0	0	18	7	6		A. C. Murphy.
Deseret	Millard	4,541	16	72.2	+ 1.2	96	7	32	30	50	0.30	+ 0.01	0.30	0.0	4	18	10	3	s.	S. W. Western.
Enterprise	Washington	4,270	2																	John Day.
Farmington	Davis	4,267	10	69.1	− 1.3	91	20	40	30	40	0.02	− 0.94	0.02	0.0	1	23	7	1	nw.	Charles Boylin.
Fillmore	Millard	5,100	20	75.4	+ 1.1	100	23	37	30	51	0.68	− 0.15	0.48	0.0	4					J. J. Starley.
Friese Summit	Wasatch										1.08		0.38	0.0	4	12	17	2	s.	Victor A. Friese.
Frisco	Beaver	7,318	16	72.4	+ 0.7	95	19	41	30	41	0.88	− 0.30	0.32	0.0	6					E. R. Smyth.
Garland	Boxelder		1	68.6		94	19	36	31	48[a]	0.03		0.03	0.0	1	22	8	1	s.	Harry B. Shaw.
Garrison	Millard		7	71.2		93	20	34	30	49[a]	0.40		0.25	0.0	2	11[a]	8[a]	11[a]	s.	E. M. Smith.
Government Creek	Tooele	5,277	10	71.8	0.0	97	7	37	30	43	0.46	− 0.69	0.20	0.0	5	23	8	0	s.	Walter James.
Grantsville	do		1																	Allen J. Fraser.
Grouse Creek	Boxelder										0.09		0.05	0.0	3	19	11	1	sw.	Philip Paskett.
Heber	Wasatch	5,606	17	64.3	− 0.4	92	7†	25	30	57	0.11	− 0.86	0.05	0.0	3	21	7	3	s.	John Crook.
Henefer	Summit	5,301	11	63.3	− 0.7	92	18	25	30	62	0.45	− 0.69	0.38	0.0	4	19	7	5	w.	Wm. Brewer.
Ibapah (near)	Tooele	7,500	5	66.8[c]		91	7	32	25	41[d]	0.41		0.24	0.0	4	19[c]	9[c]	0[c]	s.	J. S. Lawton.
Ibex	Millard																			John J. Watson.
International	Tooele	5,370	1	74.0		93	18	48	25†	33	0.70		0.38	0.0	4	21	7	3	se.	I. S & R. Co.
Iosepa	do																			James Mackie.
Kanosh	Millard	5,250	2								0.55		0.27	0.0	5					Geo. Crane.
Kelton	Boxelder	4,230	32	67.4	− 7.2	95	3	30	25	52	T.	− 0.20	T.	0.0	0	10	20	1	sw.	F. W. Klock.
Levan	Juab	5,010	20	71.0	+ 1.2	94	7†	35	30	45	0.18	− 0.75	0.08	0.0	4	22	6	3	sw.	Wm. Brown.
Logan	Cache	4,507	19	70.8	+ 0.2	92	10	41	29	37	0.05	− 0.75	0.05	0.0	1				n.	Utah Exp. Station.
Lucin	Boxelder	4,504	6	71.8		100	4	32	25	67	T.		T.	0.0	0	20	9	2		C. J. Burke.
Manti	Sanpete	5,575	16	61.4	− 7.9	80	5	34	30	34	0.30	− 0.32	0.20	0.0	2	13	5	13		J. M. Anderson.
Marion	Summit	6,750	6																	Jas. Woolstenhulme.
Marysvale	Piute	6,280	11	66.8	+ 1.6	92	26	36	30	47	0.77	− 0.96	0.22	0.0	13	10	2	19	sw.	John W. Heury.
Meadowville	Rich	6,200	11	62.0	− 1.9	89	21	25	25	52	0.15	− 0.92	0.15	0.0	1	28	1	2	w.	J. S. Moffat.
Milford	Beaver	4,962	6	73.0		98	7	38	30	51	0.50		0.50	0.0	1	15	0	16	sw.	J. C. Manuel.
Millville	Cache	4,848	15								0.02	− 0.91	0.02	0.0	1	23	7	1	s.	Fred Yeates.
Minersville	Beaver	5,070	13								1.25	+ 0.33	0.45	0.0	6					Geo. Roberts, sr.
Modena	Iron	5,479	10	70.7	+ 2.1	92	7	46	30	40	1.32	+ 0.93	0.50	0.0	5	11	17	3	sw.	U. S. Weather Bureau.
Morgan	Morgan	4,280	7																	W. Visick.
Moroni	Sanpete	5,519	2	70.4		94	26	39	25†	46	0.72		0.42	0.0	5	13	13	5	sw.	B. F. Eliason.
Mount Nebo	Utah	4,650	9	75.6		97	20†	40	30	40	1.19		0.56	0.0	5	23	6	2	s.	D. C. Walkey.
Nephi (near)	Juab	6,059	7								0.09		0.05	0.0	3	9	20	2	sw.	S. Boswell.
Oak City	Millard	4,900	6	76.2		98	18	42	25	45	0.37		0.18	0.0	4	6	22	3	sw.	Peter Nielson.
Ogden	Weber	4,310	9	70.6[c]		89	18	50	29	31[c]	0.13		0.13	0.0	1	23[b]	5[b]	1[b]	nw.	Enoch Farr.
Panguitch Lake	Garfield	9,000	1								1.60		0.50	0.0	7	8	5	18	n.	Jas. E. Prince.
Park City	Summit	7,800	13																	Irvin Evans.
Parowan	Iron	5,970	19	69.8	+ 0.4	90	22†	40	31	47	0.57	− 0.72	0.20	0.0	6	18	0	13		S. M. Matheson.
Payson	Utah	4,637	7								0.62		0.30	0.0	6	10	17	4	sw.	D. L. Coombs.
Pinto	Washington	5,907	13	65.0	+ 0.2	87	2†	36	31	47	1.99	+ 0.06	0.95	0.0	5	13	11	7	s.	J. H. Harrison.
Promontory	Boxelder	4,913	39																	F. C. Houghton.
Provo	Utah	4,532	18	73.8	+ 3.1	100	5†	38	30	52	0.31	− 0.24	0.20	0.0	2	10	21	0	n.	James A. Oliver.
Randolph	Rich	6,442	7								0.42		0.41	0.0	2	23	7	1	sw.	William Rex.
Richfield	Sevier	5,350	20	70.1	+ 0.8	95	6	38	30	51	0.10	− 0.57	0.10	0.0	1	17	6	8		Joseph J. Jensen.
Saltair	Salt Lake	4,220	7	74.1		87	8†	50	30	28	0.26		0.15	0.0	6					E. J. Bench.
Salt Lake City	do	4,360	37	74.6	− 0.9	94	20	49	30	35	0.33	− 0.45	0.18	0.0	4	19	8	4	se.	U. S. Weather Bureau.
Scipio	Millard	5,260	15	68.8	+ 0.2	94	3	28	30	55	0.44	− 0.59	0.20	0.0	4	16	4	11	sw.	Thos. Memmott.
Sevier Mine	Sevier										1.55		0.40	0.0	6	14	17	0		Max Krotki.
Silver City	Juab	6,127									0.62		0.21	0.0	5	18	13	0		J. L. Stark.
Spanish Fork Canyon	Utah	4,585	1	74.0		95	7	41	30	41	0.23		0.23	0.0	2	24	3	4		U. S. Reclamation Service.
Strawberry Valley	do		4	62.6		86	21	30	30	50	0.91		0.30	0.0	10	16	11	4		Do.
Thistle	do	5,075	18	66.5	− 3.1	97	1	26	30	55	0.91	− 0.11	0.22	0.0	7	18	3	10	w.	J. Thorgeirson.
Tooele	Tooele	4,900	14	70.4	− 2.3	93	18†	40	30	41	0.41	− 0.52	0.14	0.0	5	6	10	15	n.	E. A. Bonelli.
Utah Lake Pumping Sta.	Utah	4,500	5																	W. A. Knight.
Woodruff	Rich	6,500	12	59.0	− 1.4	88	3	20	30	57	0.30	− 0.16	0.20	0.0	2	22[c]	2[c]	4[c]		J. Sidney Pusey.
Oregon.																				
Burns	Harney	4,157	20																	J. C. Welcome, jr.
Christmas Lake	Lake	4,320	2	56.1		91	19†	18	29	66	0.00		0.00	0.0	0	19	10	2	nw.	John C. Green.
Paisley	do	4,500	6	55.4		90	3†	36	29	44	0.00		0.00	0.0	31	0	0	0	nw.	E. C. Woodward.
"P" Ranch	Harney	4,300																		J. P. Jefferson.
Silver Lake	Lake	4,700	14	57.8	− 3.1	91	8	23	29	57	T.	− 0.32	T.	0.0	0	26	0	0	w.	Wm. Holder.
California.																				
Al Tahoe	Eldorado	6,235		61.6		88[a]	8	30	18†	54	0.00		0.00	0.0	0	31	0	0	sw.	A. R. Sprague.
Glen Alpine Springs	do	6,850																		R. W. Porteous.
Tahoe	Placer			59.8		86	13†	33	29	46	0.00		0.00	0.0	0	31	0	0	w.	Robert M. Watson.
Truckee	Nevada	5,819	39	54.2	− 9.2	98	21	20	25	72	0.00	− 0.08	0.00	0.0	0	31	0	0	e.	Southern Pacific Co.
Nevada.																				
Aurora	Esmeralda																			J. I. Cain.
Austin	Lander	6,594	21																	James L. Pelton.
Battle Mountain	do	4,843	39	67.4	− 6.7	104	1	34	21	60	0.00	− 0.10	0.00	0.0	0	26	4	1	w.	Southern Pacific Co.
Beowawe	Eureka	4,905	39	67.8	− 7.3	100	10†	32	30	60	0.00	− 0.14	0.00	0.0	0	31	0	0	w.	Do.
Carlin	Elko	5,232	39	66.4	− 2.7	102	7	20	29	75	0.00	− 0.14	0.00	0.0	0	31	0	0		Do.
Carson Dam	Churchill	4,032	3	71.2[b]		95	23	41	30	44	0.00		0.00	0.0	0				w.	U. S. Reclamation Service.
Cherry Creek	White Pine	6,450	2	70.0		92	3†	39	25†	47	0.20		0.10	0.0	3	15	16	0	sw.	J. H. Leishman.
Clover Valley	Elko	6,000	10	69.4		93	4†	34	30	50	0.03		0.03	0.0	1	24	7	0		I. F. Wiseman.
Cobre	do		1	66.8	− 4.1	101	2†	23	31	63	0.03	− 0.29	0.03	0.0	1	13	16	2	ne.	Southern Pacific Co.

TABLE 1.—*Climatological data for August, 1910. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Nevada—Cont'd.																			
Columbia	Esmeralda	5,750	3	74.2	.....	96	23	46	30	38	0.08	.....	0.05	0.0	3	25	6	0	se.	A. Booth.
Dutton	Elko	5,100	2	61.6	.....	92	1†	23	30	62	0.00	.....	0.00	0.0	0	27	4	0	w.	Golconda Cattle Co.
Elko	do	5,342	39	62.4	− 5.7	91	3†	24	27	65	T.	− 0.31	T.	0.0	0	24	7	0	ne.	Southern Pacific Co.
Ely	White Pine	6,421	19	56.4	.....	80	25	33	21	35	0.97	.....	0.42	0.0	4	24	3	4	w.	G. C. Hunting.
Eureka	Eureka	6,500	7	69.6	− 0.5	92	7†	34	29	51	0.54	− 0.16	0.22	0.0	5	13	9	9	s.	Clay Simms.
Fallon	Churchill	3,965	5	71.2	− 0.8	98	3†	39	30	52	0.00	− 0.06	0.00	0.0	0	29	1	1	w.	U. S. Experiment Farm.
Fernley	Lion	4,200	2	75.1	− 0.1	99	3†	38	30	49	0.00	− 0.27	0.00	0.0	0	31	0	0	w.	Mrs. A. J. Rankin.
Gardnerville	Douglas	4,830	10	66.6	− 1.6	94	5†	30	30	58	0.00	− 0.21	0.00	0.0	0	28	1	2	e.	Wm. Dangberg.
Geyser	Lincoln	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. J. F. Wambolt.
Glenbrook	Douglas	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. C. Henningsen.
Golconda	Humboldt	4,697	31	70.4	− 2.2	97	9	33	25	57	0.00	− 0.12	0.00	0.0	0	31	0	0	sw.	Southren Pacific Co.
Halleck	Elko	5,631	17	68.0	+ 1.3	95	2†	34	24	56	0.00	− 0.20	0.00	0.0	0	30	1	0	.....	Do.
Jean	Clark	2,074	2	.....	.....	106	5†	70	1	34	1.13	.....	0.50	0.0	3	25	0	6	.....	Salt Lake Route.
Leetville	Churchill	4,020	3	72.8	.....	99	3†	39	30	48	0.00	.....	0.00	0.0	0	31	0	0	w.	U. S. Reclamation Service.
Lewers Ranch	Washoe	5,500	22	65.8	− 2.3	92	22	37	29	44	0.00	− 0.43	0.00	0.0	0	28	3	0	.....	Ross Lewers.
Lovelock	Humboldt	3,977	7	69.4	− 6.2	100	2	36	4	62	0.00	− 0.03	0.00	0.0	0	.....	.....	.....	.....	J. S. Case.
McAfees Ranch	Esmeralda	4,835	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Rodenkirch.
Millett	Nye	.....	2	68.2	.....	94	23	31	30	56	T.	.....	T.	0.0	0	26	4	1	w.	Fred J. Jones.
Mina	Esmeralda	4,600	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Palmetto	do	6,780	20	62.8	.....	93	5†	24	29	60	0.00	.....	0.00	0.0	0	.....	.....	.....	nw.	A. J. Akin.
Potts	Nye	6,990	17	64.3	− 3.5	93	3	29	30	55	T.	− 0.66	T.	0.0	0	11	6	14	s.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	8	67.3[d]	.....	96	18†	26	25†	68	0.00	.....	0.00	0.0	0	30	0	1	sw.	F. M. Payne.
Reno	Washoe	4,532	39	69.8	+ 2.8	96	22	41	30	45	0.00	− 0.25	0.00	0.0	0	31	0	0	w.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Tecoma	Elko	4,812	32	62.8	−10.0	96	22	23	25†	62	T.	− 0.25	T.	0.0	0	13	12	6	se.	Southern Pacific Co.
Tonopah	Nye	6,090	3	74.7	.....	91	23	48	29	29	0.24	.....	0.24	0.0	1	21	10	0	w.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	7	65.5	.....	92	2†	32	30	52	0.00	.....	0.00	0.0	0	31	0	0	nw.	Vic Bernard.
Wells	Elko	5,631	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Winnemucca	Humboldt	4,432	31	67.7	− 3.1	95	19	37	25	56	0.00	− 0.17	0.00	0.0	0	31	0	0	sw.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
| Estimated by observer.
|| Precipitation for the 24 hours ending on the morning when it is measured
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 10, Great Basin.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Border	Bear											.15	T.	T.																		0.15
Cokeville	...do	.08	.10										T.	T.														T.				0.18
Evanston	...do	.33										.09		.11						.15												0.68
Idaho.																																	
Geneva	Bear											.45		.08																		0.53
Grace	...do	.08									T.	.12	T.	.12	T.					T.	.04							T.				0.36
Oxford	...do																																
Paris	...do											.90	.02	.03																		0.95
Stone	Deep Creek																																
Weston	Bear	.24											.22	.33																		0.79
Utah.																																	
Alpine	Great Salt Lake	.40										.35										.05										0.80
Annabella	Sevier Lake																																
Beaver	...do	.02		.22	.02					.03	.40	.07	.12						T.	.08			.60				.05	.75				2.36
Black Rock	...do	.54												.07														.10				0.71
Blacksmiths Fork	Great Salt Lake																																
Card Canyon	...do																																
Castle Rock	...do																																
Cedar City	Desert		T.	.06	.30	.34				.07		.35								T.			T.					.25				1.37
Corinne	Great Salt Lake																															0.00
Deseret	Sevier Lake									.30		.15	.03															.02				0.50
Enterprise	Desert																																
Farmington	Great Salt Lake											.02	T.	T.														T.				0.02
Fillmore	Sevier Lake	.10								T.		.48		.07						T.		T.		T.			T.	.03			T.	0.68
Friese Summit	Great Salt Lake			.19										.23				T.						.28					.38			1.08
Frisco	Desert			.08									.32							.06				.10			.25	.07				0.88
Garland	Great Salt Lake	.03																														0.03
Garrison	Desert	T.							T.	T.	T.	T.	T.							T.	T.	.25	T.				.15					0.40
Government Creek	...do		.05									.16	T.	.02						T.		.03						.20				0.46
Grantsville	Great Salt Lake																																
Grouse Creek	Desert	.03												.05						T.							.01					0.09
Heber	Great Salt Lake	.03							T.		.05		.03	T.													T.	T.				0.11
Henefer	...do	.38	.01					T.				.05		T.						T.								.01				0.45
Ibapah	Desert	T.			.08					.05	T.			T.						.04	T.	.24					T.	T.				0.41
Ibex	...do																																
International	Great Salt Lake											.38	.06	.22														.04				0.70
Iosepa	Desert																																
Kanosh	Sevier Lake	.02								.04		.16	.06															.27				0.55
Kelton	Great Salt Lake	T.																														T.
Levan	Sevier Lake	T.								.03		.03	T.								T.	T.					.04	T.	.08			0.18
Logan	Great Salt Lake	.05																														0.05
Lucin	Desert	T.									T.		T.																			T.
Manti	Sevier Lake		.20									.10								T.												0.30
Marion	Great Salt Lake																																
Marysvale	Sevier Lake	.03			.05					.22	.04	.02	.02	.04					T.	.11	.06	.05		.07			.05				.01	0.77
Meadowville	Great Salt Lake	.15	T.									T.																				0.15
Milford	Sevier Lake												T.							T.		T.	.50	T.								0.50
Millville	Great Salt Lake	.02																														0.02
Minersville	Sevier Lake			.14	.07					T.	.11	.17						T.	T.	T.		.45	.31									1.25
Modena	Desert				.36					T.	T.	.50											.27	T.			.14				.05	1.32
Morgan	Great Salt Lake																																
Moroni	Sevier Lake		.12					T.		T.	.02	T.	.11		T.					.42		T.					T.	T.	.05			0.72
Mt. Nebo	Great Salt Lake	.34	.11									.16	.56							.02								T.				1.19
Nephi (near)	...do	.05										.02															.02					0.09
Oak City	Sevier Lake		.09							.18				.08								.02										0.37
Ogden	Great Salt Lake	.13																														0.13
Panguitch Lake	Sevier Lake	T.	.20	.30	.25					.08	.05	.50							T.				T.				.22				T.	1.60
Park City	Great Salt Lake																																
Parowan	Desert				.06	.07							.20							.11		.06					.07					0.57
Payson	Great Salt Lake	.30	T.							T.	.03	.12		.08						T.		.04							.05			0.62
Pinto	Desert			.10	.52					T.		.95											.26					.16				1.99
Promontory	Great Salt Lake																																0.00
Provo	...do													.20															.11			0.31
Randolph	...do										.41	.01																				0.42
Richfield	Sevier Lake											T.	.10									T.					T.	T.				0.10
Saltair	Great Salt Lake	.04	.01									.04	.01	.15	.01													T.				0.26
Salt Lake City	...do	.04						T.		T.		.18	T.	T.	T.						.01							.10				0.33
Scipio	Desert	.18								.01		.20															T.	T.	.05			0.44
Sevier Mine	Sevier Lake	.40		T.	T.					.30	.20	.30	.05										.30									1.55
Silver City	Desert	.21										.21	.07														.07	.06				0.62
Spanish Fork Canyon	Great Salt Lake																											*	.23			0.23
Strawberry Valley	...do	.30	.02		.12							.14	.03	T.						.06		.03	.01				.02		.18			0.91
Thistle	...do	.20	.10	T.						T.	T.	.11	T.	.14	T.					T.		T.					.09	.22	.05			0.91
Tooele	...do	T.	.10		T.					T.	T.	.03	.06	.14							T.						T.	.08				0.41
Utah Lake Pump'g Sta.	...do																																
Woodruff	...do											.10	.20																			0.30
Oregon.																																	
Ana River	Southeast Drainage																															0.00
Burns	...do																																
Burns Mill	...do																															0.00
Christmas Lake	...do																															0.00
Diamond "H" Ranch	...do																																
Paisley	...do																															0.00
Plush	...do																															0.00
"P." Ranch	...do																																
Silver Lake	...do								T.																							T.
Valley Falls	...do																															0.00
California.																																	
Al Tahoe	Truckee																															0.00
Bijou	...do																																
Boca	...do																																
Bodie	East Walker																						T.									T.
Bridgeport	...do																																
Brockway	Truckee																																
Deer Park	...do																																
Donner Ice Camp	...do																															0.00	
Fales' Hot Springs	West Walker																															0.00	
Glen Alpine Springs	Truckee																																
Hobart Mills	...do																															0.00	
Lundy	East Walker																															0.00	
Markleeville	East Carson																																
McKinney	Truckee																																
Shields' Ranch	West Walker																															0.00	
Silver Creek	East Carson																																

TABLE 2.—*Daily precipitation for August, 1910. District No. 10*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																															
Tahoe	Truckee																														0.00
Tallac	...do																														
Truckee	...do																														
Woodfords	West Carson																														
Nevada.																															
Aurora	East Walker																														
Austin	Reese																														
Battle Mountain	Humboldt																														0.00
Beowawe	...do																														0.00
Carlin	...do																														0.00
Carson Dam	Carson																														0.00
Cherry Creek	Humboldt	.03								T.	T.	.10									.07						T.				0.20
Clover Valley	...do																			.03											0.03
Cobre	...do					.03	T.							T.																	0.03
Columbia	Desert				.05																T.						.01			.02	0.08
Dutton	Humboldt																														0.00
Elko	...do	T.																		T.											T.
Ely	...do		.15										.04	.42														.36			0.97
Eureka	...do	.22								T.		.16	.04								.04						.08				0.54
Fallon	Carson																														0.00
Fernley	Truckee																														0.00
Gardnerville	Carson																														0.00
Geyser	Humboldt																														
Glenbrook	Truckee																														
Golconda	Humboldt																														0.00
Halleck	...do																														0.00
Jean	Desert											.50										.48								.15	1.13
Lectville	Carson																														0.00
Lewers Ranch	Truckee																														0.00
Lovelock	Humboldt																														0.00
McAfee's Ranch	Desert																														
Millett	Reese																				T.		T.								T.
Mina	Desert																														
North Fork	Humboldt																			.03											0.03
Palmetto	Desert																														0.00
Paradise Valley	Little Humboldt																														0.00
Potts	Reese																				T.	T.			T.						T.
Quinn River Ranch	Humboldt																														0.00
Reno	Truckee																														0.00
Rose Creek	Humboldt																														0.00
Smith	West Walker																														0.00
Spooners Ranch	Truckee																														0.00
Soda Lake	Carson																														
Sweetwater	East Walker																														0.00
Tecoma	Humboldt	T.			T.						T.																				T.
Tonopah	Desert																													.24	0.24
Wabuska	Walker																														0.00
Wells	Humboldt																														
Willow Point	Little Humboldt																														0.00
Winnemucca	Humboldt																														0.00

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 10, Great Basin.*

Date.	Wyoming.				Weston, Idaho.		Utah.																					
	Border.		Evanston.				Corinne.		Deseret.		Government Creek.		Ibapah.		Marysvale.		Meadowville.		Modena.		Ogden.		Parowan.		Provo.		Salt Lake City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	87	45	80	48	86	52	97	56	91	62	90	58	80	50	84	55	85	50	90	59	84	60	87	57	97	69	90	62
2	84	43	80	46	87	50	100	56	94	52	90	57	85	51	87	49	83	46	90	56	86	62	88	58	98	60	87	63
3	85	36	82	43	89	46	97	58	93	59	90	58	85	51	83	51	80	43	87	58	82	61	82	58	92	58	88	63
4	86	35	81	44	89	45	95	52	89	63	89	58	83	51	78	55	88	40	87	57	85	59	83	58	87	60	85	66
5	81	40	77	43	86	48	99	46	90	51	90	57	83	47	84	45	79	49	88	51	83	60	84	57	100	52	84	63
6	86	32	80	39	88	43	97	47	95	47	93	56	87	52	88	43	83	41	91	54	86	56	80	53	100	53	90	60
7	86	37	82	38	89	44	96	52	96	50	97	53	91	52	89	51	84	41	92	60	88	60	88	59	94	45	92	64
8	84	34	81	41	87	47	95	50	94	53	90	52	84	48	87	55	81	44	90	57	83	56	86	59	92	54	86	65
9	83	36	79	40	86	44	102	52	90	57	92	54	83	54	88	53	83	40	84	58	81	60	86	58	90	54	87	62
10	90	40	83	42	89	52	101	58	90	55	93	59	84	53	84	47	86	48	85	57	86	61	85	56	94	56	90	62
11	82	62	81	46	88	53	99	55	92	55	82	58	.....	.....	74	54	83	52	72	59	83	66	82	56	92	56	85	64
12	83	44	79	44	85	52	94	58	89	55	84	52	.....	.....	81	58	79	45	82	56	.....	.....	82	56	89	57	86	62
13	83	43	79	46	84	48	91	53	88	53	85	56	82	48	81	47	80	50	84	51	81	59	83	55	92	58	86	62
14	80	37	75	40	84	48	93	55	90	51	88	56	85	48	83	46	83	40	85	52	.....	.....	84	52	92	55	88	64
15	78	36	76	38	82	45	94	55	89	49	87	51	85	45	84	42	78	45	85	50	83	57	85	48	92	55	84	60
16	81	37	79	39	84	49	99	55	88	56	88	57	86	51	80	43	81	41	82	51	82	59	85	46	96	54	84	65
17	83	35	80	38	84	42	97	53	90	53	88	57	86	48	86	46	81	42	86	47	81	51	86	54	90	54	86	63
18	90	36	84	43	89	44	99	58	94	52	93	57	87	51	90	45	80	40	89	49	89	61	85	58	96	54	93	66
19	90	38	82	47	92	50	102	54	95	62	92	66	83	56	91	53	84	44	89	61	88	65	81	62	96	62	92	70
20	89	69	77	47	90	54	99	52	94	61	93	61	90	55	88	51	87	59	90	58	87	68	89	57	99	57	94	68
21	88	42	83	43	93	53	101	58	95	61	94	64	75	56	88	52	89	58	91	62	86	70	89	57	99	57	92	73
22	86	30	82	44	90	42	99	58	94	55	91	58	86	52	87	51	83	40	91	58	83	59	90	57	92	40	89	68
23	86	36	82	42	91	42	99	50	95	62	93	64	86	54	87	53	84	40	89	57	85	62	90	57	100	65	91	69
24	80	29	76	34	77	40	90	46	87	52	83	52	80	50	87	56	74	45	91	60	75	52	88	54	84	59	74	60
25	77	20	77	27	75	26	87	38	83	38	80	38	73	32	84	40	67	25	85	49	.....	.....	82	55	82	40	76	53
26	88	27	80	31	88	38	95	42	94	46	92	52	85	52	92	45	86	34	90	55	81	50	82	56	97	49	92	57
27	85	49	81	45	90	65	95	53	92	64	90	64	87	57	84	53	84	53	85	56	85	63	82	57	96	62	90	59
28	86	41	81	43	86	50	98	50	92	64	91	57	88	52	86	48	84	46	87	56	84	34	83	45	94	59	90	65
29	76	41	75	42	73	49	89	46	75	49	68	40	75	36	79	49	68	40	82	51	73	50	85	54	85	53	76	54
30	75	22	74	25	77	30	95	41	82	32	80	37	.....	36	79	36	73	27	82	46	73	.....	86	50	86	38	77	49
31	70	29	75	30	82	36	92	40	88	51	85	54	.....	.....	80	51	80	27	81	51	80	54	87	40	92	50	85	57
Mns	83.5	38.1	79.5	40.6	85.8	46.0	96.3	51.5	90.6	53.9	88.4	55.3	83.9[d]	49.6[e]	84.6	49.1	81.0	42.1	86.5	54.9	83.0[e]	58.3[d]	85.0	54.5	93.1	54.5	86.7	62.5

Date.	Burns, Oreg.		Nevada.																									
			Elko.		Ely.		Eureka.		Fallon.		Jean.		Lovelock.		Millet.		Mina.		Quinn River Ranch.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	88	46	67	46	83	50	97	56	104	70	99	55	91	50	.....	.....	94	62	92	53	88	44	87	66	92	51
2	.....	.....	90	44	69	48	84	50	95	52	103	79	100	38	92	47	.....	.....	92	58	91	52	92	42	88	63	90	57
3	.....	.....	91	46	74	55	90	50	98	53	.....	.....	93	37	93	47	.....	.....	95	39	93	54	90	48	89	65	95	54
4	.....	.....	88	39	70	48	89	63	94	56	106	85	97	36	92	53	.....	.....	90	45	91	56	86	46	89	66	91	54
5	.....	.....	89	38	71	46	89	50	95	51	106	87	98	40	92	48	.....	.....	91	47	93	53	88	44	89	65	90	46
6	.....	.....	91	38	68	42	91	53	96	51	.....	.....	94	49	93	43	.....	.....	94	50	90	52	90	42	91	68	90	44
7	.....	.....	89	34	65	41	92	53	98	46	.....	.....	95	50	93	42	.....	.....	94	50	89	50	92	44	90	64	92	47
8	.....	.....	90	33	70	46	90	49	94	43	.....	.....	94	49	92	47	.....	.....	93	43	92	51	92	42	88	62	92	55
9	.....	.....	88	38	76	42	86	53	95	54	.....	.....	95	52	89	48	.....	.....	94	40	91	52	90	44	87	64	94	48
10	.....	.....	90	37	69	38	89	56	93	57	.....	.....	93	58	90	47	.....	.....	93	47	89	55	92	44	86	64	94	52
11	.....	.....	90	36	64	42	86	60	94	52	.....	.....	98	42	92	55	.....	.....	.....	.....	88	53	90	46	87	63	91	54
12	.....	.....	85	39	68	35	82	60	89	50	.....	.....	96	40	89	47	.....	.....	89	44	85	49	88	48	85	62	88	56
13	.....	.....	86	38	68	39	82	49	90	47	.....	.....	97	39	88	43	.....	.....	91	43	84	48	86	46	83	60	88	40
14	.....	.....	85	34	70	42	87	47	90	47	.....	.....	94	41	89	43	.....	.....	90	48	86	50	88	42	84	59	88	42
15	.....	.....	85	39	66	37	88	48	90	48	.....	.....	98	43	90	43	.....	.....	87	52	90	49	86	33	86	62	87	44
16	.....	.....	83	38	68	40	88	50	90	52	.....	.....	92	41	87	43	.....	.....	85	48	88	48	88	34	83	60	84	43
17	.....	.....	89	37	77	43	85	47	91	47	.....	.....	99	45	85	40	.....	.....	94	35	89	52	88	36	82	58	90	49
18	.....	.....	91	29	70	40	87	58	91	49	.....	.....	94	40	89	40	.....	.....	96	44	89	51	92	34	85	63	93	44
19	.....	.....	87	42	72	41	88	61	96	53	103	98	95	39	89	53	.....	.....	94	46	91	55	92	36	86	68	95	44
20	.....	.....	90	50	71	38	89	55	96	51	102	77	93	40	91	50	.....	.....	92	46	91	50	94	38	90	67	94	52
21	.....	.....	89	47	68	33	85	57	94	50	105	79	96	49	88	54	.....	.....	96	38	93	48	90	36	90	70	92	46
22	.....	.....	88	39	70	37	92	52	96	55	105	75	98	52	91	50	.....	.....	95	38	96	53	96	34	91	70	94	38
23	.....	.....	90	37	74	39	92	57	97	53	104	79	97	48	94	49	.....	.....	.....	.....	95	56	92	40	91	67	92	42
24	.....	.....	81	35	77	45	87	47	85	47	.....	.....	96	40	88	44	.....	.....	.....	.....	87	52	78	38	88	65	75	42
25	.....	.....	86	29	80	46	90	39	90	43	105	78	95	50	92	42	.....	.....	94	26	95	50	76	23	89	60	87	37
26	.....	.....	80	32	73	40	88	65	98	57	105	79	97	48	93	53	.....	.....	96	41	89	59	86	30	90	68	94	51
27	.....	.....	89	24	70	40	87	54	95	50	104	78	90	40	90	56	.....	.....	90	48	86	49	82	34	86	66	90	44
28	.....	.....	88	35	69	46	88	47	90	42	103	78	93	39	88	44	.....	.....	83	41	81	45	78	36	84	58	83	40
29	.....	.....	89	36	73	42	81	34	74	47	100	77	89	38	86	45	.....	.....	78	39	72	41	78	36	76	48	72	38
30	.....	.....	87	26	71	45	84	45	88	39	92	77	91	41	87	31	.....	.....	85	26	86	41	76	23	82	53	84	39
31	.....	.....	84	28	70	41	84	57	91	45	95	71	93	40	86	42	.....	.....	.....	.....	83	46	82	28	81	55	86	41
Mns	.....	.....	87.8	37.0	70.6	42.1	87.2	52.1	92.6	49.8	.....	.....	95.1	43.8	90.0	46.4	.....	.....	91.3[d]	43.3[d]	88.9	50.7	87.3	38.4	86.5	62.9	89.3	46.1

Climatological Data for August, 1910.

DISTRICT No. 11. CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

August is a month of little rain in this district. The present season, however, has been marked by the absence of rain, not only in California but over the entire Pacific Slope. In fact, there appears to have existed an unusually dry spell. It was also a season when the temperature was below the normal. Speaking generally there was less than half of the seasonal rainfall, and in some places little more than one-quarter. Eighty-seven per cent of the stations reporting were without rain. In most respects August throughout California was an average midsummer month. Owing to the early stoppage of the rainy season, the roads were unusually dusty, the water in wells low, and the streams at a lower stage than known for many years. Snow in the mountains was to be found only on a few of the higher peaks. At elevations less than 12,000 feet there was little or no snow.

The precipitation was less than in any year during which records have been kept.

The weather was favorable from an agricultural standpoint and fruits ripened nicely. There was not, however, a sufficient supply of water at most points. There were no especially warm periods. Afternoon temperatures in the Great Valley frequently exceeded 100°, but this is not unusual. The highest afternoon temperature in the San Joaquin Valley occurred on the 23d and averaged about 108°. The highest afternoon temperature in the lower Sacramento Valley was 102° on the 23d; but in the northern part of the valley, 105° on the 5th.

TEMPERATURE.

The mean temperature for the State was normal. The following table shows the mean temperatures for California during the time in which records have been kept:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	73.9	+1.4	1904	73.9	+1.4
1898	74.5	+2.0	1905	73.4	+0.9
1899	70.8	−1.7	1906	73.6	+1.1
1900	71.0	−1.5	1907	71.0	−1.5
1901	75.6	+3.1	1908	73.3	+0.8
1902	71.8	−0.7	1909	72.1	−0.4
1903	72.6	+0.1	1910	72.5	0.0

The highest temperature reported at any station was 120° on August 30 and 31, at Mammoth Tank. This was 6° higher than the highest temperature recorded during August, 1909, which occurred at the same point. Temperatures, however, as high as 130° have been recorded at points in the Salton Desert in previous years. The lowest temperature recorded was 20° on August 31, at Quincy, in Plumas County. This is 4° colder than the lowest temperature recorded during August, 1909.

At many stations the monthly mean temperature was 5° or more above the normal; yet on the other hand, at most stations it was from 2° to 4° below the normal. Indeed the temperature varied greatly at stations not far apart; and local factors apparently influenced to a large degree the readings.

PRECIPITATION.

The average monthly precipitation for the State was 0.01 of an inch or 0.05 of an inch below the normal. The normal, however, is unduly large, owing to a phenomenal rainfall in 1909.

The greatest monthly precipitation was 0.91 inch at Needles. Rain was reported only at 13 per cent of the stations considered. The precipitation occurred almost entirely in the southern counties and was associated with storms of the Sonora type. The heaviest 24-hour rainfall was 0.53 inch at Needles.

There was no rain on the north coast during the month. This is quite unusual as generally light showers occur. At the close of the month the rainfall at Eureka for the period from April 1 to August 31 was about one-quarter of the usual amount.

The average monthly precipitation for California in August is as follows:

Year.	Amount.	Departure.	Year.	Amount.	Departure.
	Inch.	Inch.		Inch.	Inch.
1897	0.03	−.03	1904	0.17	+.11
1898	0.02	−.04	1905	0.03	−.03
1899	0.11	+.05	1906	0.13	+.07
1900	0.02	−.04	1907	0.11	+.05
1901	0.12	+.06	1908	0.12	+.06
1902	0.06	.00	1909	0.19	+.13
1903	0.02	−.04	1910	0.01	−.05

SUNSHINE.

The following table gives the hours of sunshine and the percentage of possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka	143	33	Sacramento	425	100
Fresno	418	100	San Diego	320	77
Los Angeles	415	83	San Francisco	309	73
Mount Tamalpais	414	98	San Jose	345	82
Red Bluff	425	100	San Luis Obispo	304	73

EARTHQUAKES.

Eureka, Cal., August 4.—A sharp earthquake shock occurred at 5:27 p. m. It came as one jolt and was of sufficient violence to shake buildings and stop the office clock. The vibrations were from a southerly direction and lasted about 8 seconds. Barometer, 30.15 inches; temperature, 55°; clear; wind, north, 5 miles per hour. The maximum phase of new moon occurred at 10:20 p. m. A second shock was felt about midnight. Very light.—*A. H. Bell, Observer.*

Santa Clara, Cal., August 4.—The seismograph at Santa Clara College registered a disturbance, which was the longest one on record here. It began at 5:32 p. m. and ended at 6:45:18 p. m., and had a west movement. The greatest amplitude was at 5:34:40 p. m., movement east and west. The vertical component showed a period of 2 seconds main portion and varying to 6 seconds at the end. The disturbance had its origin apparently southeast of Santa Clara College. No shock felt.

Santa Clara, August 11.—The seismograph recorded a disturbance at 8:37:45 a. m., ending 8:41 a. m. The maximum north and south movement was at 8:37:54; an east-west movement at 8:38:10. The period was 2 seconds and the disturbance apparently northeast of Santa Clara.

Santa Clara, Cal., August 20.—9:49:38 p. m., ending 10:05 p. m., period 2 seconds. Two distinct shocks recorded, second at 9:57:36. Disturbance west of here.

Santa Clara, Cal., August 26.—12:30:48 p. m., ended 12:37. Two distinct shocks recorded. Period about ½ second on first and 1½ on second record. Disturbance northwest. Many short tremors between.

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS FOR THE MONTH OF AUGUST, 1910.

By N. R. TAYLOR, Local Forecaster, Sacramento, Cal.

Sacramento watershed.—There was a steady but slow fall in all of the smaller streams in the Sacramento drainage basin during the month of August. The Sacramento River itself from Red Bluff to the mouth of the Pitt has remained practically station-

ary since the last of July. While the river at Red Bluff averaged slightly above the low water of 1908, it was, with this exception, the lowest ever recorded during any month. Below Red Bluff, especially in most of the reaches between Colusa and Knights Landing, there was little interruption in the fall of the river during the month.

At Colusa the Sacramento averaged 1.1 foot, which is 1.4 foot below the August normal stage, and 1.2 foot below the low water of 1908.

At Knights Landing the zero stage was reached on the 9th of the month, and on the 31st a stage of 0.3 below zero was recorded, which is the lowest stage ever before noted at this point.

At Sacramento the river averaged 0.1 foot above the previous lowest monthly average, which was in September, 1908, and 2.4 feet below the August normal stage. At this point the fall was frequently interrupted by the tides, which, in some cases, amounted to a rise of as much as 0.4 foot. Below Sacramento there was little departure from the summer stage, except that the effects of flood tides were more marked than usual.

In some of the reaches the Sacramento has left its usual summer channel, and, as a result, navigation has been rendered difficult, and frequent groundings have occurred among the large craft.

The Yuba River at Marysville averaged over 1 foot below the usual August stage, and was 0.8 foot lower than the previous lowest average for the month. The run-off in the numerous forks of this stream was markedly deficient, so much so that it is reported that several mines have been compelled to close on account of the scarcity of water.

At Oroville the Feather averaged 1.4 foot below the usual August stage, and nearly 1 foot below the lowest previous monthly average of which there is a record. At the close of the month all the feeders of the Feather River carried less water than they have ever been known to carry before.

The American River at Folsom averaged 0.6 foot below the normal August stage, and was 0.3 foot lower than the low water of August, 1908. The run-off of all streams in the headwaters of this river diminished very slowly during the month, and the American itself exhibited an unusually sluggish condition, there being a range of only 0.1 foot between the highest and lowest stages.

San Joaquin watershed.—All reports received from streams in the drainage basin of the San Joaquin during August show a steady but gradual decrease in the water supply, and, in some cases, exhibit lower gage readings than have ever before been recorded. The Stanislaus at Melones averaged over 3 feet below the zero of the gage. The Mokelumne at Electra averaged 0.1 below zero, and the Tuolumne at Jacksonville averaged 0.3 foot above the zero of the gage. The Merced River at Merced Falls averaged 0.8 foot below the zero of the gage and 0.4 below the lowest previous average for the month of August.

The San Joaquin River itself was markedly below its usual August stage from Pollasky to Lathrop, but from Lathrop to the lower islands there was little departure from the normal summer stage.

SMOKE FROM BURNING FORESTS.

The British ship *Dunfermline*, which arrived at San Francisco from Newcastle, Australia, August 31, 1910, reports that the smell of the forest fires was noticed when the ship was 500 miles from land. The odor of burning wood was quite unmistakable and officers of the ship stated that they expected to find evidence of a great conflagration upon reaching port. The haze from the forest fires made it impossible to get an observation for about 10 days.

The observation is of unusual interest because the prevailing winds in this region are from the west or northwest. During the morning hours, however, there is a gentle movement of the lower air from the land seaward. It seems hard to realize that the smoke should have been carried so far from the land.

MOUNTAIN SITES FOR OBSERVATORIES ON THE PACIFIC SLOPE.

By A. G. McADIE.

It was the writer's privilege to be a member of Doctor Campbell's expedition to the summit of Mount Whitney in August, 1909, when certain spectroscopic studies were made of the atmosphere of Mars. The site was selected, after some preliminary investigations by Messrs. Campbell and Abbot, because it is practically above the level of the water vapor of the atmosphere. This virtually eliminates absorptive effects due to dust, haze, water vapor, and other matter prevailing in general in the lower air strata. The elevation is 4,400 meters and the general climatic reputation one of clear weather and extreme dryness. Mount Whitney is historically familiar because of Langley's early work on the transparency of the atmosphere and his determination of the value of the solar constant. Langley's work was carried on not at the summit, but some 600 meters below, over on the Kern side, at what is now known as Langley's Camp. In 1909 Abbot repeated to some degree the earlier observations, using, however, the summit. His is the first use of a complete bolometric outfit at an elevation above 4 kilometers.

The station has again been occupied during the present season by Abbot and doubtless some valuable solar energy curves were obtained for comparison with those made at lower levels.

Acting on the recommendation of Messrs. Campbell and Abbot, Dr. C. D. Walcott, Secretary of the Smithsonian Institution, authorized the construction of a small stone building on the summit, and this shelter is now available for astrophysical purposes. The erection of this shelter is in line with the development of high-level observatories in America. The establishment of the Lick Observatory may be said to mark the beginning of the movement in favor of sites where research could be conducted under atmospheric conditions markedly different from those where the great astronomical observatories of the world were situated, namely, at low levels and near centers of population. Harvard Observatory early recognized the value of high-level sites and established observing stations in South America. The inauguration of the Solar Physics Observatory at Mount Wilson is but a progressive development and clearer recognition of the necessity of carrying on work where there is the greatest possible freedom from the atmospheric disturbances so common at low levels.

Primarily the degree of definition or clearness of seeing will determine the reputation of both observatory and observer. The astrophysicist is handicapped by his inability to get away from earth; or to get out of the convectional region, i. e., from the surface up to the region of constant temperature. If it were possible to work at an elevation of about 11 kilometers, it would be found that the "load," as it may be called, of foreign matter in the atmosphere is practically *nil*, and that the several gases are distributed according to their molecular weights. The so-called isothermal region is one in which there is no vertical convection; and also, because of the absence of water vapor, one where absorption of solar radiation is a minimum. Professor Turner has pointed out that such conditions must materially affect refraction.

Recent discussion of the amount of water vapor in the atmosphere of Mars shows the need of some better knowledge of the amount of water vapor in the lower air strata. Water vapor is present to the extent of 1.2 per cent of the total gases at the surface of the earth (according to Humphreys[1]), and decreases rapidly with increase of elevation to an imperceptible amount at or below 10 kilometers. It is plain, therefore, that for problems connected with planetary atmospheres, as well as solar and stellar atmospheres, and for work bearing upon solar radiation, the greater the altitude, other things being equal, the more accurate the work. If one stops to consider the irregular dis-

[1] Mount Weather Bulletin, Vol. 2, Part 2, p. 66.

tribution of heat near the ground, the marvel is not that definition is sometimes poor, but that the wave front is not more distorted and to such a degree as to prevent anything like good definition. This is especially true during the day hours and for some time after sunset. The convectional currents resulting from differences in temperature due to radiation, and, in a small degree, conduction of heat near the surface undoubtedly affect seeing. The best seeing, as a rule, occurs during the early morning hours. Doubtless a curve could be developed showing a close relation between seeing and instability of the lower air. This is a matter of importance in solar work when conducted on mountain sites; and, especially if, as in the case of Mount Whitney and other peaks in the high Sierra, there are steep walls or precipitous sides favoring the development of strong afternoon ascensional currents.

Hale, in discussing the conditions on Mount Wilson, shows that the seeing is best during the early morning hours, although frequently good in the late afternoon:

> Shortly after sunrise the sun's limb is serrated, but this effect becomes less and less marked as the sun's altitude increases. Usually at this time in the morning the atmosphere is almost perfectly calm and cloudless. The seeing usually improves and reaches a maximum, where it remains for some time. The effect of the heating of the mountain then becomes apparent and the definition deterioriates. Disturbances at the sun's limb under these conditions do not resemble those seen immediately after sunrise, but have a fluttering appearance, which we are accustomed to speak of as the heating effect. In the late afternoon the seeing usually improves, but is rarely very good at midday. This is not a rule without exception, however, as we have sometimes recorded nearly perfect definition during the hottest hours of the day.[2]

The particular class of disturbances here referred to is probably caused by ground heating effects. The instability of the air may be effective up to a height of 100 meters. There is another class, which will be referred to later, where the instability of the air occurs at a much higher level and is not directly caused by earth heat. Poor definition, caused by the first of the above-named conditions, can, to some degree, be counteracted by mounting the telescope at an elevation of 20 or more meters above the ground. Hale has shown that at a height of 25 meters there is a marked improvement in definition. He has also demonstrated beyond criticism the value of modern construction and design in the prevention of irregular heating of the air column.

Finally, in selecting a mountain site for an observatory, one must consider the effect of storm frequency. In this respect the mountains of California, south of the Tehachipi, have a marked advantage over mountains in other sections of the country. Few storms pass that way. This means that there is less stratification of the air and in general better definition, provided the telescope is mounted at some height. With the passage of each cyclone and anticyclone, ascensional and descensional circulations are established and not infrequently marked temperature inversions occur. There may be an inversion of temperature close to the ground, and, at the same time, another inversion at a considerable elevation. One may be due to cold, slow-moving air currents near the earth's surface; while another may be due to the approach of the warm center of an area of high pressure. Recent investigations of the free air have brought to light the fact that up to a level of about 3 kilometers regular temperature gradients or gradients approximating the adiabatic rate of cooling are the exception rather than the rule. We have an almost incessant warming of air due to compression of descending masses on the one hand and a cooling of air due to expansion in rising, and the whole materially modified, especially in the lower level by the water vapor present.

The highest efficiency, therefore, is to be obtained by the establishment of observatories in regions where there is a minimum, both of storm action and of vertical circulation, where inversions of temperature are infrequent and where there is a minimum amount of water vapor.

[2] Study of Conditions for Solar Research at Mount Wilson. Yearbook No. 3, Carnegie Institution, page 170.

MEETING OF THE SOLAR RESEARCH UNION AT MOUNT WILSON, CAL.

The International Union for Cooperation in Solar Research held its Fourth Conference at the Mount Wilson Solar Observatory, California, August 29 to September 3, 1910. Previous meetings of the Association were held at St. Louis, Oxford, and Paris. The next meeting will be held at Bonn in 1913. The following members of the Fourth Conference were present at Mount Wilson:

Prof. J. S. Ames,	Johns Hopkins University,	Baltimore, Md.
Prof. Charles G. Abbot,	Smithsonian Astrophisical Observatory,	Washington, D. C.
Prof. Walter S. Adams,	Mount Wilson Solar Observatory,	Mount Wilson, Cal.
Prof. Harold D. Babcock,	Solar Observatory,	Mount Wilson, Cal.
Prof. J. O. Backlund,	Observatoire de Poulkovo,	Poulkovo, Russia.
Prof. E. E. Barnard,	Yerkes Observatory,	Williams Bay, Wis.
Prof. A. Belopolsky,	Observatoire de Poulkovo,	Poulkovo, Russia.
Prof. Jean Bosler,	Observatoire de Meudon,	Meudon, France.
Prof. F. P. Brackett,	Pomona College,	Claremont, Cal.
Miss Cora G. Burwell,	Solar Observatory,	Mount Wilson, Cal.
Prof. W. W. Campbell,	Lick Observatory,	Mount Hamilton, Cal.
Prof. C. A. Chant,	University of Toronto,	Toronto, Canada.
Prof. Henri Chretien,	Observatoire de Nice,	Nice, France.
Rev. P. R. Cirera, S. J.,	Observatorio del Ebro,	Tortosa, Spain.
Dr. W. W. Coblentz,	Bureau of Standards,	Washington, D. C.
Rev. A. L. Cortie, S. J.,	Stonyhurst College Observatory,	Lancashire, England.
Prof. A. Cotton,	Ecole Normale Superieure,	Paris, France.
Prof. H. Deslandres,	Observatoire de Meudon,	Meudon, France.
Prof. N. Donitch,	Observatoire de l'Universite,	St. Ptersburg Russia.
Prof. Frank L. Drew,	Solar Obsevatory,	Mount Wilson, Cal.
Prof. F. W. Dyson,	Royal Observatory,	Edinburgh, Scotland.
Prof. Ferdinand Ellerman,	Solar Observatory,	Mount Wilson, Cal.
Dr. P. Eversheim,	University of Bonn,	Bonn, Germany.
Prof. Chas. Fabry,	University de Marseilles,	Marseilles, France.
Dr. Edward A. Fath,	Solar Observatory,	Mount Wilson, Cal.
Mrs. W. P. Fleming,	Harvard College Observatory,	Cambridge, Mass.
Prof. F. E. Fowle,	Smithsonian Astrophysical Observatory,	Washington, D. C.
Prof. A. Fowler,	Imperial College of Science and Technology,	South Kensington, London, England.
Prof. Philip Fox,	Dearborn Observatory,	Evanston, Ill.
Prof. E. B. Frost,	Yerkes Observatory,	Williams Bay, Wis.
Dr. Henry G. Gale,	University of Chicago,	Chicago, Ill.
Prof. L. H. Gilmore,	Throop Polytechnic Institute,	Pasadena, Cal.
Miss C. D. Griffin,	Solar Observatory,	Mount Wilson, Cal.
Prof. George E. Hale,	Solar Observatory,	Mount Wilson, Cal.
Prof. M. Hamy,	Observatoire de Paris,	Paris, France.
Prof. J. Hartmann,	Koenigliche Sternwarte,	Goettingen, Germany.
Prof. K. Haussmann,	Technische Hochschule,	Aachen, Germany.
Prof. J. V. Hepperger,	Imperial Observatory,	Vienna, Austria.
Major E. H. Hills,	32 Prince's Garden,	London, England.
Prof. W. J. Humphreys,	U. S. Weather Bureau,	Washington, D. C.
Professor Idrac,	Observatoire de Muedon,	Meudon, France.
Prof. J. C. Kapteyn,	Astronomical Laboratory,	Groningen, Holland.
Prof. H. Kayser,	University of Bonn,	Bonn, Germany.
Dr. Arthur S. King,	Solar Observatory,	Mount Wilson, Cal.
Prof. H. Konen,	Physikalisches Institute,	Muenster, Germany.
Prof. F. Kuestner,	Koenigliche Sternwarte,	Bonn, Germany.
Prof. C. O. Lampland,	Lowell Observatory,	Flagstaff, Ariz.
Sir Joseph Larmor,	Royal Society,	London, England.
Miss Jennie B. Lasby,	Solar Observatory,	Mount Wilson, Cal.
Prof. A. O. Leuschner,	University of California,	Berkeley, Cal.
Prof. H. C. Lord,	Emerson McMillin Observatory,	Columbus, Ohio.
Prof. A. G. McAdie,	U. S. Weather Bureau,	San Francisco, Cal.
Dr. Walter M. Mitchell,	Detroit Observatory,	Ann Arbor, Mich.
Prof. H. F. Newall,	University Observatory,	Cambridge, England.
Prof. F. G. Pease,	Solar Observatory,	Mount Wilson, Cal.
Prof. E. C. Pickering,	Harvard College Observatory,	Cambridge, Mass.
J. S. Plaskett, Esq.,	Dominion Observatory,	Ottawa, Canada.
Comte A. de la Baume Pluvinel,	7 Rue de la Baume,	Paris, France.
Prof. E. Pringsheim,	University of Breslau,	Breslau, Germany.
Prof. P. Puiseux,	Observatoire de Paris,	Paris, France.
Prof. A. Ricco,	Osservatorio Astrofisico,	Catania, Sicily.
Prof. W. G. Ritchey,	Solar Observatory,	Mount Wilson, Cal.
Rev. J. S. Ricard, S. J.,	Santa Clara, College,	Santa Clara, Cal.
Prof. A. L. Rotch,	Blue Hill Observatory,	Hyde Park, Mass.
Dr. Henry Norris Russell,	Princeton University,	Princeton, N. J.
Prof. J. R. Rydberg,	University of Lund,	Lund, Sweden.
Dr. Charles E. St. John,	Solar Observatory,	Mount Wilson, Cal.
Prof. Fernando Sanford,	Stanford University,	Palo Alto, Cal.
Dr. Frank Schlesinger,	Allegheny Observatory,	Allegheny, Pa.
Prof. Arthur Schuster,	Victoria Park,	Manchester, England.
Prof. K. Schwarzschild,	Astrophysikalisches Observatorium,	Potsdam, Germany.
Prof. F. H. Seares,	Solar Observatory,	Mount Wilson, Cal.
Dr. V. M. Slipher,	Lowell Observatory,	Flagstaff, Ariz.
Prof. Frederick Slocum,	Yerkes Observatory,	Williams Bay, Wis.
Miss Ruth E. Smith,	Solar Observatory,	Mount Wilson, Cal.
Prof. S. W. Stratton,	Bureau of Standards,	Washington, D. C.
Prof. K. Struve,	Koenigliche Sternwarte,	Berlin, Germany.
Prof. S. D. Townley,	Stanford University,	Palo Alto, Cal.
Prof. H. H. Turner,	University Observatory,	Oxford, England.
Miss Louise Ware,	Solar Observatory,	Mount Wilson, Cal.
Miss Phoebe Waterman,	Solar Observatory,	Mount Wilson, Cal.
Prof. F. R. Watson,	University of Illinois,	Champaign, Ill.
Prof. H. C. Wilson,	Goodsell Observatory,	Northfield, Minn.
Prof. A. Wolfer,	Sternwarte des Eidgenossischen Polytechnikums,	Zurich, Switzerland.

The Mount Wilson Solar Observatory was established as a Department of the Carnegie Institution of Washington in 1904. There is now in operation a 60-inch reflecting telescope with a primary focus of 25 feet and mirror combinations, giving equivalent foci of 80, 100, and 150 feet. Used with this telescope are various stellar spectrographs. The Snow horizontal telescope has a mirror of 24 inches aperture and a focal length of 60 feet

This telescope is used with an 18-foot solar spectrograph. There is also a 5-foot spectroheliograph for direct photography of the sun. The tower telescope has an objective of 12 inches aperture and 60 feet focal length. A 30-foot solar spectrograph, also a 30-foot spectroheliograph are used in the study of sun-spot spectra, the investigation of solar rotation, and the spectra of the chromosphere and center and limb. A second tower telescope has an objective of 12 inches aperture and 150 feet focal length, giving a solar image 17 inches in diameter. In order to get a wider range of dispersion new instruments are in course of construction.

The machine shop, instrument, and optical shops and the physical laboratory are located in Pasadena. These are well equipped. The new 100-inch mirror will be figured and ground in the shops. A list of the investigations in progress or recently completed at Mount Wilson includes the following:

Daily direct photographs of the sun, spectroheliograms in calcium and hydrogen light, and special spectroheliograms with high dispersion, for the general investigation and classification of the flocculi and prominences, including structure at different levels, effect of absorption, possible influence of anomalous refraction, and relationship to sun-spots.—Messrs. Hale and Ellerman.

Law of solar rotation as determined by the motions of the hydrogen and calcium flocculi.—Messrs. Hale and Ellerman.

Daily areas of calcium flocculi, and comparison with records of terrestrial magnetism.—Messrs. Hale and Ellerman, in cooperation with Dr. Baker.

A general investigation of solar magnetism, including determinations of polarity and field strength for various elements and at different levels within and outside of sun-spots, inclination of axis of the electric vortex, rotation of plane of polarization by spot vapors, relationship of polarity to structure of hydrogen and calcium flocculi.—Messrs. Hale, Ellerman, and Babcock.

A general investigation of sun-spot spectra, including wave-lengths and origin of spot lines, cause of weakened and strengthened lines, etc.—Messrs. Hale and Adams.

Photographic investigation of the spectrum of the chromosphere, including wave-lengths and origin of bright lines, cause of displacements, etc.—Messrs. Hale and Adams.

Absolute wave-lengths of the H and K lines.—Mr. St. John.

General circulation of the solar calcium vapor as indicated by the displacements of the H and K lines.—Mr. St. John.

Spectroscopic study of the motions of vapors in sun spots.—Mr. St. John.

Spectroscopic investigation of the rotation of the sun as determined by the displacements of lines of different elements.—Mr. Adams.

Comparison of the spectra of the center and limb of the sun.—Mr. Adams.

Direct photography:
- Of nebulæ and star clusters.—Mr. Ritchey.
- Of the Kapteyn Selected Areas.—Mr. Fath.
- Investigations in photographic photometry.—Mr. Seares.

Spectroscopic investigations:
- Of nebulæ and star clusters.—Mr. Fath.
- Of bright stars under very high dispersion.—Messrs. Hale, Adams, and Babcock.
- Radical velocity investigations of faint stars with low dispersion, including parallax stars and Orion type stars.—Messrs. Adams and Babcock.

Electric furnace investigations of the effect of varying temperature on spectra.—Mr. King.

General work on arc and spark spectra under a great variety of physical conditions.—Mr. King.

Complete study of the Zeeman effect through a large range of wave-lengths for various spectra, and tests for polarization, etc., for special spectrum lines.—Messrs. King and Babcock.

Study of the effects of pressure on spark spectra, with special reference to enhanced lines.—Mr. Gale.

On the absorption of light in space.—Mr. Kapteyn.

Statistical investigations relating to stellar evolution.—Mr. Kapteyn.

Study of special groups of star streams.—Mr. Kapteyn.

The meeting decided by unanimous vote to enlarge the scope of the work carried on by the Solar Union, to include research in astrophysics as well as solar physics.

It was also unanimously agreed to adopt a standard scale of wave-lengths, to be known as the International and the unit used to be known as the International Ångström. Reports were received from various committees on various questions on solar rotation. Committees were appointed on standard wave-lengths, measurement of solar radiation, spectroheliographic investigation of the spectra of sun-spots, eclipse observations, and determination of solar radiation.

The accompanying illustrations are reproduced through the courtesy of the Sierra Club.

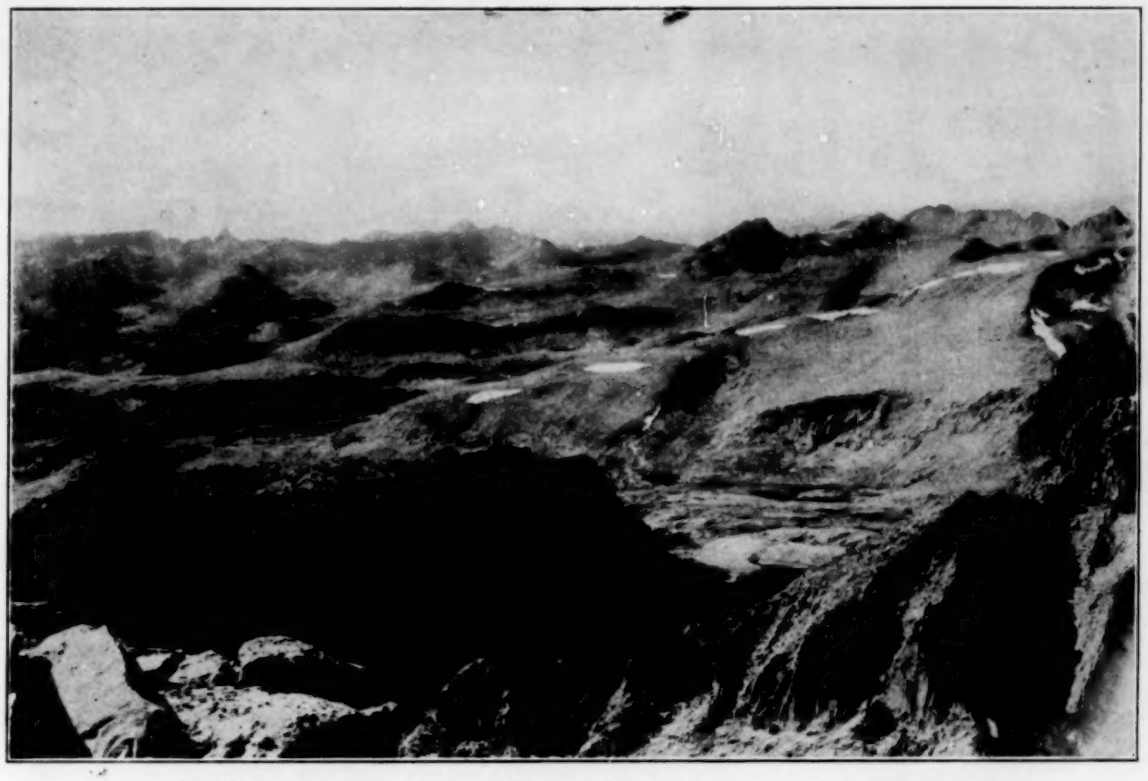


FIG. 1.—Looking northwest from Mount Whitney. (From photograph by Dr. W. W. Campbell.)

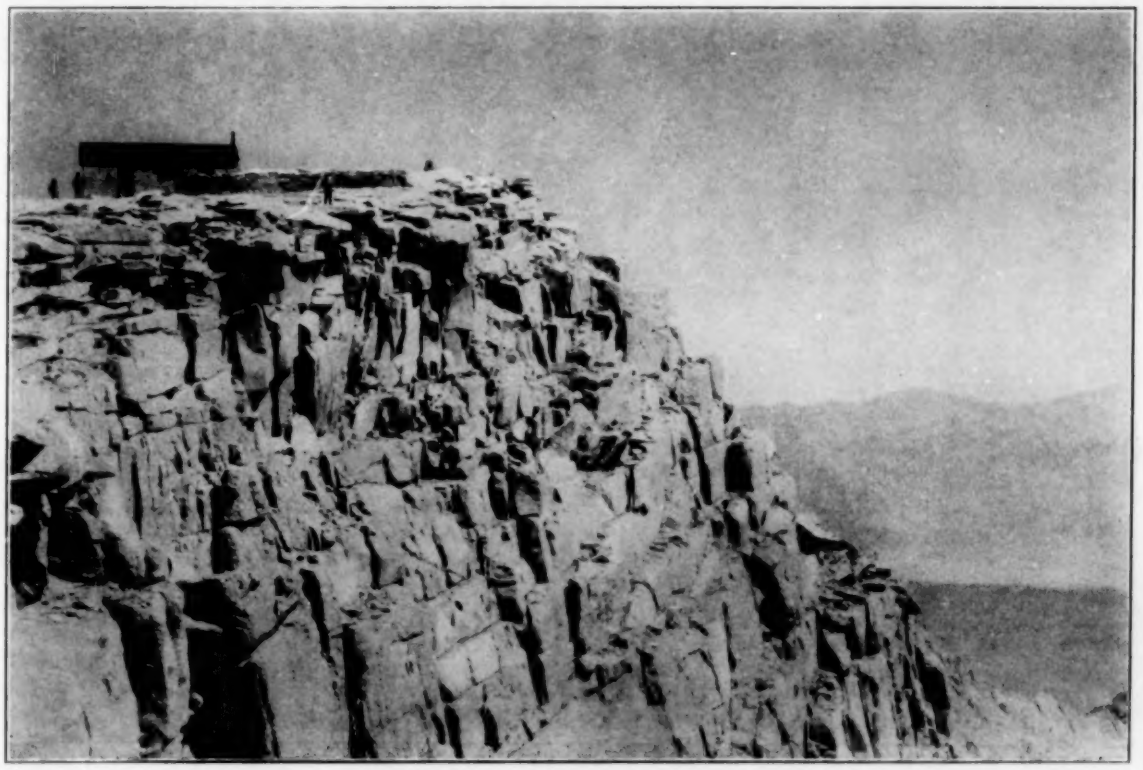


FIG. 2.—The Observatory on Mount Whitney, 14,502 feet. (From photograph by Dr. W. W. Campbell, 1909.)

FIG. 3.—Abbot's Spectrobolometer for determining solar constant. The summit of Mount Whitney, 14,502 feet. (From photograph by Dr. W. W. Campbell.)

FIG. 4.—Eastern face of Mount Whitney from Lone Pine Trail. (From photograph by U. S. Department of Agriculture.) Face of cliff, 2,000 to 3,000 feet shear.

TABLE 1.—*Climatological data for August, 1910. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Klamath Agency	Klamath	4,169	2	54.8		87	1†	22	30	56	0.00		0.00	0.0	0	29	2	0	nw.	Edson C. Watson.
Klamath Falls	do	4,250	15	63.3	− 3.6	91	25	31	29	49	0.00	− 0.29	0.00	0.0	0	30	1	0	nw.	W. H. Heilman.
Lakeview	Lake	4,800	7	69.2	+ 2.9	100	27†	41	23	48	0.04	− 0.25	0.02	0.0	3	21	4	6	s.	Geo. L. Wharton, jr.
Merrill	Klamath	4,070	4	61.8		92	10	28	29	52	0.00		0.00	0.0	0	31	0	0		Mrs. Agnes Ritchson.
Yonna	do		3	59.7		89	3†	22	29	58	0.00		0.00	0.0	0	31	0	0	w.	Jacob Rueck.
California.																				
Alameda	Alameda		1	63.9*		85	29	52	3†		0.00		0.00	0.0	0					Chas. E. Sears.
Alturas	Modoc	4,460	6	63.0		96	25	25	29	60	0.00		0.00	0.0	0	31	0	0	sw.	Prof. C. B. Towle.
Anderson (near)	Shasta	550	1																	C. S. Richardson.
Angiola	Tulare	208	10	72.6	− 4.8	108	23	39	6†	61	0.00	0.00	0.00	0.0	0	31	0	0		Santa Fe Co.
Antioch	Contra Costa	46	31																	Southern Pacific Co.
Aptos	Santa Cruz	102	25	59.2	− 2.2	76	29	51	21		0.00	− 0.05	0.00	0.0	0	21	3	7	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	1	79.4		101	19†	55	16	37	0.00		0.00	0.0	0	31	0	0		G. I. Royce.
Auburn	Placer	1,360	9	76.8	+ 0.9	100	5	51	18	40	0.00	− 0.02	0.00	0.0	0	31	0	0		Southern Pacific Co.
Avalon	Los Angeles			65.6		78	30	57	13†	20	T.		T.	0.0	0	28	3	0	w.	W. N. Vilas.
Azusa	do	540	8																	A. P. Griffith.
Bagdad	San Bernardino	784	7	96.8		112	6†	76	17†	29	0.00		0.00	0.0	0	31	0	0		Santa Fe Co.
Bakersfield	Kern	404	21	84.0	− 0.7	108	6†	58	29	40	0.00	− 0.01	0.00	0.0	0	31	0	0		Do.
Barstow	San Bernardino	2,105	7	86.0		112	23	53	29	52	0.00		0.00	0.0	0	31	0	0	n.	E. L. White.
Berkeley	Alameda	317	23	58.9	− 2.0	78	29	49	21	26	0.00	−0.07	0.00	0.0	0	7	8	16	sw.	State University
Biggs	Butte	98	11	80.2	+ 6.2	102	23	64	27†		0.00	− 0.02	0.00	0.0	0	31	0	0	s.	Southern Pacific Co.
Bishop	Inyo	4,450	15	72.9	+ 0.9	95	3†	50	14†	42	0.00	− 0.22	0.00	0.0	0	26	4	1		W. A. Chalfant.
Blocksburg	Humboldt	1,700	4	66.4		97	24	38	21	57	0.00		0.00	0.0	0	31	0	0	nw.	Victor Hope.
Blue Canon	Placer	4,695	11	65.9	+ 3.2	88	22†	42	27†	42	0.00	− 0.16	0.00	0.0	0	30	0	1	n.	Southern Pacific Co.
Blythe	Riverside		1	91.0		114	25†	58	14	49	0.10		0.10	0.0	1	18	10	3	sw.	H. V. Blenkiron.
Branscomb	Mendocino	2,000	10	66.8		97	22	40	27	56	0.00	− 0.02	0.00	0.0	0	31	0	0	n.	A. J. Haun.
Brawley	Imperial	−105	1																	U. S. Weather Bureau.
Brush Creek	Butte	2,140	6	70.2		102	4†	40	22†	62	0.00		0.00	0.0	0	31	0	0		Cal. Gas & Electric Co.
Calexico	Imperial	0	5	93.0		114	19†	62	14	45	T.		T.	0.0	0	13	6	12	se.	J. E. Peck.
Caliente	Kern	1,290	34	89.7	+ 6.6	105	7	70	30		0.00	− 0.01	0.00	0.0	0	31	0	0		Southern Pacific Co.
Calistoga	Napa	363	38																	Do.
Campbell	Santa Clara	217	13	62.5	− 1.6	95	23	40	27†	49	0.00	− 0.04	0.00	0.0	0	31	0	0	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	3	78.8		106	5	50	13	50	0.00		0.00	0.0	0	31	0	0		S. B. Johnson.
Cedarville	Modoc	4,675	16	68.9	− 0.3	97	24	39	29†	53	0.00	− 0.26	0.00	0.0	0	31	0	0	sw.	T. H. Johnstone.
Chico	Butte	189	40	77.2	− 4.3	106	5	50	9†	52	0.00	− 0.03	0.00	0.0	0	31	0	0	s.	Butte Co. R. R.
China Flat	Humboldt	600	1	73.1		104	8†	41	27	55	0.00		0.00	0.0	0	31	0	0	nw.	O. I. Westerburg.
Chino	San Bernardino	714	18	78.1	+ 2.9	98	9†	58	30		0.00	0.00	0.00	0.0	0	31	0	0	w.	Southern Pacific Co.
Cisco	Placer	5,939	39	76.8	+15.0	93	14	55	31		0.00	− 0.02	0.00	0.0	0	31	0	0		Do.
Claremont	Los Angeles	1,200	18	75.7	+ 5.1	102	22†	49	15†	43	0.00	− 0.05	0.00	0.0	0	27	4	0	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	69.8		108	22	39	21	61	0.00		0.00	0.0	0	31	0	0	s.	Lloyd Browne.
Colfax	Placer	2,421	39	74.5	− 2.0	95	3†	53	29	35	0.00	− 0.02	0.00	0.0	0	30	0	1	s.	Southern Pacific Co.
Colusa	Colusa	60	7	77.0		100	5	55	22†	41	0.00	0.00	0.00	0.0	0					W. K. De Jarnatt.
Corning	Tehama	277	24	84.9	+ 3.8	105	5	65	13†		0.00	− 0.03	0.00	0.0	0	30	1	0	n.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	11	74.3	+ 9.8	93	6	53	14	28	0.09	+ 0.02	0.08	0.0	2	7	21	3	e.	L. L. Macquarie.
Daunt	Tulare	4,000	3	74.0		100	6	50	29	45	0.00		0.00	0.0	0	30	1	0		D. L. Wishon.
Davisville	Yolo	51	38	70.3	− 3.8	107	23	37	21	61	0.00	− 0.01	0.00	0.0	0	30	0	1	sw.	S. H. Beckett.
Deer Creek	Nevada	3,700	3	64.6		91	24	39	13†	46	0.00		0.00	0.0	0	30	1	0	w.	Cal. Gas & Electric Co.
Delta	Shasta	1,138	25																	Southern Pacific Co.
Denair	Stanislaus	126	10	74.6	− 1.8	105	23	46	12	52	0.00	0.00	0.00	0.0	0	31	0	0		Santa Fe Co.
Dobbins	Yuba	1,650	6	78.2		102	23	56	28	38	0.00		0.00	0.0	0	31	0	0	s.	Cal. Gas & Electric Co.
Dudleys	Mariposa	3,000	1	65.9		95	23	35	28†	52	T.		T.	0.0	0	30	1	0	n.	W. H. Dudley.
Dunnigan	Yolo	65	33	86.6	+ 6.9	106	5	65	27		0.00	− 0.02	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
Dunsmuir	Siskiyou	2,285	21	70.2	+ 3.3	97	3	50	20†		0.00	− 0.10	0.00	0.0	0	31	0	0	n.	Do.
Durham	Butte	160	15	75.4	− 0.3	104	5	48	9	49	0.00	− 0.03	0.00	0.0	0	31	0	0	s.	R. W. Durham
El Cajon	San Diego	482	11	73.2	+ 2.2	98	26	50	17	40	0.00	− 0.11	0.00	0.0	0	31	0	0	sw.	H. H. Kessler.
Electra	Amador	725	6	81.0		108	22	52	28†	47	0.00		0.00	0.0	0	31	0	0		Cal. Gas & Electric Co.
Elsinore	Riverside	1,234	15	77.7	+ 0.6	108	27	44	14	52	0.00	− 0.05	0.00	0.0	0	28	3	0	w.	W. H. Bohannon.
Emigrant Gap	Placer	5,230	36	70.0	+ 4.1	90	22	45	30	38	0.00	− 0.04	0.00	0.0	0	31	0	0		Southern Pacific Co.
Escondido	San Diego	657	16	72.7	+ 0.6	99	23	48	13	46	T.	0.00	T.	0.0	0	5	26	0	w.	A. R. Moon.
Eureka	Humboldt	64	24	53.4	− 2.4	65	24	46	15	19	0.00	− 0.14	0.00	0.0	0	6	8	17	nw.	U. S. Weather Bureau.
Farmington	San Joaquin	111	31	79.3	+ 3.1	102	23	56	12		0.00	0.00	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Folsom	Sacramento	252	38	78.2	− 1.2	107	23	52	12†	48	0.00	− 0.03	0.00	0.0	0	31	0	0	s.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	15	60.8		82	22	40	1†	37	0.00	− 0.38	0.00	0.0	0	31	0	0	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	6	71.2		98	26	42	31	51	0.00		0.00	0.0	0					H. S. Green.
Fresno	Fresno	293	23	81.6	+ 0.4	107	23	56	29	43	0.00	0.00	0.00	0.0	0	29	2	0	nw.	U. S. Weather Bureau.
Fruto	Glenn	624	21	80.1	− 0.5	104	5	60	28		0.00	− 0.05	0.00	0.0	0	31	0	0	s.	Southern Pacific Co.
Galt	Sacramento	49	32	71.0	− 6.4	96	26	53	9		0.00	− 0.01	0.00	0.0	0	31	0	0	w.	Do.
Georgetown	El Dorado	2,650	37	75.4	− 2.5	98	23	53	28†	37	0.00	− 0.02	0.00	0.0	0	31	0	0	sw.	H. D. Jerrett.
Gilroy	Santa Clara	193	36	64.7	− 0.2	100	22†	50	4†		0.00	− 0.04	0.00	0.0	0	31	0	0	se.	Southern Pacific Co.
Gold Run	Placer	3,222	11	77.6	+ 5.0	95	21†	58	14	30	0.00	− 0.02	0.00	0.0	0	30	1	0		Do.
Gonzales	Monterey	127	11	56.5	− 4.8	85	22	43	19†		0.00	0.00	0.00	0.0	0	31	0	0	n.	Do.
Grass Valley	Nevada	2,690	38	74.0		94	23†	50	29	34	0.00	− 0.02	0.00	0.0	0	30	1	0	sw.	F. R. Hull.
Greenville	Plumas	3,600	16	63.2	− 0.3	99	22	30	28†	68	0.00	− 0.30	0.00	0.0	0	31	0	0	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	1	74.6		96	23	46	28	38	T.		T.	0.0	0	30	1	0		H. S. Richardson.
Guinda	Yolo	350	12	80.6	+ 0.5	96	13	61	31		0.00	− 0.03	0.00	0.0	0	30	1	0		Southern Pacific Co.
Hanford	Kings	249	10	78.6	+ 1.1	104	8†	53	28†	44	0.00	0.00	0.00	0.0	0	28	0	3		Santa Fe Co.
Healdsburg	Sonoma	110	17	66.8	+ 2.0	104	23	40	20†	62	0.00	− 0.02	0.00	0.0	0	11	20	0	s.	John Favour.
Hearst	Mendocino	1,800		69.1		95	4	48	8†	46	0.00		0.00	0.0	0	31	0	0		H. D. Ellmaker.
Heber	Imperial	−20	4	93.4		116	11	62	15	47	0.32		0.32	0.0	1	25	5	1	se.	E. T. Chumard.
Hollister	San Benito	284	36	62.2	− 4.5	93	22	41	29	49	0.00	− 0.04	0.00	0.0	0	31	0	0	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	22	55.0	−20.3	98	2	35	24		0.00	− 0.14	0.00	0.0	0	31	0	0		Southern Pacific Co.
Hot Springs	Tulare	3,300	3	75.8		98	7	49	17	40	0.00		0.00	0.0	0	31	0	0		U. S. Forest Service.
Hullville (near)	Lake	2,250	3	72.6		101	22	46	21†	49	0.00		0.00	0.0	0	27	4	0	sw.	John Duggan.
Idyllwild	Riverside	5,250	9	69.0		98	6†	39	27	54	0.21		0.13	0.0	2	17	12	2	sw.	Earl Powers.
Independence	Inyo	3,907	14																	U. S. Weather Bureau.
Indio	Riverside	−20	32	93.0	0.0	114	22	66	16	40	0.08	− 0.06	0.08	0.0	1	23	8	0	se.	F. N. Johnson.
Inskip	Butte	4,975	3	66.2		84	22†	50	28	28	0.00		0.00	0.0	0	31	0	0		Cal. Gas & Electric Co.
Ione	Amador	287	32	78.7	+ 0.6	104	23	56	13†		0.00	0.00	0.00	0.0	0	30	1	0	nw.	Southern Pacific Co.
Iowa Hill	Placer	2,825	29																	C. F. Macy.
Jamestown	Tuolumne	1,471	7	74.7		100	23	49	29	45	0.00		0.00	0.0	0	31	0	0		Sierra Ry. of California.
King City	Monterey	333	23	66.2	− 0.2	101	23	37	19†	56	0.00	0.00	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
La Porte	Plumas	5,000	16	64.0	+ 4.2	89	22†	41	28	39	0.00	− 0.22	0.00	0.0	0	31	0	0	n.	C. W. Hendel.
Le Grand	Merced	235	10	76.2	0.0	106	5†	50	7†	53	0.00	0.00	0.00	0.0	0	31	0	0		Santa Fe Co.
Lemon Cove	Tulare	600	15	82.9	+ 3.0	111	6	53	29	53	0.00	0.00	0.00	0.0	0	31	0	0	w.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	21	72.0	+ 2.9	87	23	55	29	21	0.00	− 0.03	0.00	0.0	0	31	0	0	nw.	The Director.
Livermore	Alameda	485	39	71.0	+ 1.4	105	22†	41	21	55	0.00	− 0.03	0.00	0.0	0	31	0	0	w.	E. G. Still.
Lodi	San Joaquin	45	28	71.2	− 1.8	99	23	46	13†	44	0.00	− 0.05	0.00	0.0	0	31	0	0	w.	Ezra Fiske.

TABLE 1.—*Climatological data for August, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Lone Pine	Inyo	2,728	5	74.2	.....	100	24	48	30	47	T.	.....	T.	0.0	0	24	7	0	s.	G. F. Marsh.
Long Valley	Lassen	4,400	1	73.2	.....	96	3	38	39	46	0.00	.....	0.00	0.0	0	22	9	0	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	33	70.1	+ 1.5	90	23	55	13	29	T.	− 0.03	T.	0.0	0	25	6	0	sw.	U. S. Weather Bureau.
Los Banos	Merced	121	23	76.8	− 2.5	109	23†	57	12	...	0.00	0.00	0.00	0.0	31	0	0	0	w.	Southern Pacific Co.
Los Gatos	Santa Clara	600	23	66.6	− 0.6	101	23	43	21	47	0.00	− 0.05	0.00	0.0	0	31	0	0	n.	F. H. McCullagh.
Lytle Creek	San Bernardino	2,900	1	72.6	.....	99	6	45	16	46	0.00	.....	0.00	0.0	0	14	11	6	.....	W. E. Anderson.
Macdoel	Siskiyou	4,258	3	62.2	.....	93	23	30	26	57	0.00	.....	0.00	0.0	0	30	1	0	nw.	B. V. L. Co.
Madeline	Lassen	5,270	1	61.1	.....	90	25	27	29	52	0.00	.....	0.00	0.0	0	31	0	0	w.	J. H. Williams.
Magalia	Butte	2,321	6	73.2	.....	98	3†	48	29	47	0.00	.....	0.00	0.0	0	31	0	0	se.	Butte County R. R. Co.
Mammoth Tank	Imperial	257	32	92.5	− 4.3	120	30†	57	14	49	0.10	− 0.13	0.10	0.0	1	24	7	0	w.	Southern Pacific Co.
Marysville	Yuba	67	39	74.0	− 4.9	102	5†	48	21	51	0.00	0.00	0.00	0.0	0	31	0	0	s.	Do.
Mecca	Riverside	−185	4	84.4	.....	111	5†	66	14†	38	0.05	.....	0.05	0.0	1	21	10	0	se.	A. Lunsted.
Menlo Park	San Mateo	64	32	65.8	− 0.9	90	29	50	29	...	0.00	− 0.04	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Merced	Merced	173	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Mill Creek (1)	Amador		3	69.4	.....	93	24	46	17†	40	0.00	.....	0.00	0.0	0	31	0	0	n.	Cal. Gas & Electric Co.
Milton (near)	Calaveras	660	19	77.0	+ 0.5	103	23	50	10	43	0.00	− 0.01	0.00	0.0	0	31	0	0	nw.	J. H. Southwick.
Modesto	Stanislaus	90	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Mojave	Kern	2,751	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Mokelumne Hill	Calaveras	1,550	17	77.7	+ 5.1	100	23	54	28	36	0.00	− 0.02	0.00	0.0	0	31	0	0	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	4	68.9	.....	92	6†	43	29	42	0.00	.....	0.00	0.0	0	31	0	0	w.	H. Lathrop.
Montague	Siskiyou	2,450	22	66.0	−11.7	98	25	28	29	60	0.00	− 0.15	0.00	0.0	0	28	2	1	n.	G. H. Chambers.
Monterey	Monterey	15	45	61.9	0.0	72	23	54	22†	...	0.00	− 0.03	0.00	0.0	0	31	0	0	se.	Southern Pacific Co.
Monterio	Kern	4,500	11	80.6	+ 6.5	100	19†	60	29†	30	0.00	− 0.15	0.00	0.0	0	28	2	1	nw.	John C. Knecht.
Monumental	Del Norte		5	66.1	.....	96	20	35	26	60	0.00	.....	0.00	0.0	0	31	0	0	.....	G. F. Morgan.
Mount Tamalpais	Marin	2,375	11	70.4	+ 4.5	90	22	43	17	31	0.00	− 0.01	0.00	0.0	0	30	1	0	nw.	U. S. Weather Bureau.
Napa City	Napa	20	33	62.4	− 2.6	97	22	40	21	52	0.00	− 0.03	0.00	0.0	0	30	1	0	s.	Thomas Hull.
Napa (S. H.)	...do	60	32	66.1	+ 1.1	100	22	46	21†	50	0.00	− 0.03	0.00	0.0	0	29	2	0	s.	W. H. Martin.
Needles	San Bernardino	477	18	94.0	+ 1.7	112	6†	70	15	36	0.91	+ 0.69	0.53	0.0	4	25	2	4	.....	Santa Fe Co.
Nellie	San Diego	5,350	1	74.0=	.....	92	6†	38	12	50	T.	.....	T.	0.0	0	.....	.....	.....	.....	C. J. Bailey.
Nevada City	Nevada	2,580	18	69.9	+ 2.9	98	5†	39	29	52	0.00	− 0.05	0.00	0.0	0	31	0	0	sw.	S. W. Marsh.
Newcastle	Placer	970	17	80.0	+ 2.3	105	23	49	1†	55	0.00	− 0.05	0.00	0.0	0	31	0	0	s.	George D. Kellog.
Newhall	Los Angeles	1,200	33	77.6	+ 0.3	105	20	58	16	...	0.00	− 0.03	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
Newman	Stanislaus	91	21	80.6	− 1.2	105	23	56	12	41	0.00	− 0.01	0.00	0.0	0	31	0	0	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	6	71.2	.....	94	5†	49	29	43	0.00	.....	0.00	0.0	0	31	0	0	s.	Cal. Gas & Electric Co.
North Bloomfield	Nevada	3,200	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Shand.
North Fork	Madera	3,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Shinn.
Oakdale	Stanislaus	156	16	77.4	+ 1.1	104	5	56	12	...	0.00	− 0.02	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Oakland	Alameda	36	34	60.4	− 0.9	80	29	50	5†	25	0.00	− 0.03	0.00	0.0	0	10	17	4	w.	Chabot Observatory.
Oceanside	San Diego		...	71.6	.....	85	23	58	27	24	0.01	.....	0.01	0.0	1	6	23	0	w.	H. D. Brodie.
Ojai Valley	Ventura	900	4	71.4	.....	101	20†	44	14	49	0.00	.....	0.00	0.0	0	31	0	0	sw.	W. H. Duncan.
Orland	Glenn	254	28	79.8	− 4.4	108	5†	54	9	47	0.00	− 0.02	0.00	0.0	0	31	0	0	se.	W. W. Patch.
Orleans	Humboldt	520	7	77.8	.....	108	7†	45	29	58	0.00	.....	0.00	0.0	0	31	0	0	.....	Fred T. Hale.
Oroville (near)	Butte	250	26	77.4	− 1.9	104	5†	52	13†	46	0.00	− 0.02	0.00	0.0	0	29	2	0	s.	E. D. Fairchild.
Palermo	...do	213	19	75.6	− 1.5	106	5	48	28	53	0.00	− 0.06	0.00	0.0	0	29	2	0	s.	Miss Hettie Boalt.
Palm Springs	Riverside	584	21	91.4	− 1.8	112	5	80	40†	...	0.22	+ 0.03	0.22	0.0	1	29	0	2	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	20	71.6	− 1.9	97	20	47	14	42	0.00	− 0.02	0.00	0.0	0	31	0	0	sw.	E. R. Sorver.
Paso Robles	San Luis Obispo	800	23	67.6	− 3.5	106	27	36	13	63	0.00	− 0.12	0.00	0.0	0	31	0	0	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	14	62.2	− 1.1	97	23	38	2†	55	0.00	− 0.05	0.00	0.0	0	19	12	0	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	3	79.0	.....	95	24†	59	29	32	0.00	.....	0.00	0.0	0	31	0	0	s.	Tuolumne W. P. Co.
Placerville	El Dorado	1,875	21	69.2	− 0.6	94	23	44	28†	42	0.00	− 0.02	0.00	0.0	0	31	0	0	sw.	A. Baring Gould.
Point Lobos	San Francisco	250	17	54.7	− 2.3	74	23	46	3	22	0.00	− 0.06	0.00	0.0	0	2	7	22	sw.	John Hyslop.
Point Reyes	Marin	490	18	52.6	− 1.9	68	23	46	3	17	0.00	− 0.13	0.00	0.0	0	5	9	17	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	21	81.7	− 3.1	109	6†	50	28	49	0.00	− 0.01	0.00	0.0	0	29	2	0	.....	Harry E. Cowie.
Quincy	Plumas	3,400	15	61.2	− 2.4	90	2†	20	31	62	0.00	− 0.17	0.00	0.0	0	31	0	0	sw.	D. N. Rogers.
Red Bluff	Tehama	307	33	80.4	− 0.6	105	5	57	28	41	0.00	− 0.02	0.00	0.0	0	31	0	0	se.	U. S. Weather Bureau.
Redding	Shasta	552	35	80.4	− 0.6	103	5†	59	12†	39	0.00	− 0.09	0.00	0.0	0	31	0	0	nw.	L. F. Bassett.
Redlands	San Bernardino	1,352	17	76.4	− 1.1	103	27	49	14†	52	T.	− 0.52	T.	0.0	0	25	4	2	w.	Paul W. Moore.
Reedley	Fresno	347	10	79.9	− 0.1	108	23†	51	29	49	0.00	0.00	0.00	0.0	0	31	0	0	w.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	4	77.1	.....	98	19	54	16	32	T.	.....	T.	0.0	0	25	6	0	sw.	So. California Edison Co.
Riverside	Riverside	851	28	76.4	0.0	104	22†	48	14	47	0.00	− 0.18	0.00	0.0	0	21	10	0	w.	C. W. Barton.
Rocklin	Placer	249	39	75.0	− 3.2	103	23	46	28	49	0.00	− 0.04	0.00	0.0	0	31	0	0	se.	Southern Pacific Co.
Rohnerville	Humboldt	75	7	56.6	.....	79	24	39	23	39	0.00	.....	0.00	0.0	0	18	13	0	n.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	33	72.0	− 0.1	102	23	49	11	47	0.00	0.00	0.00	0.0	0	31	0	0	s.	U. S. Weather Bureau.
Sacramento (2)	...do	35	57	70.1	− 2.5	96	23	48	13	40	0.00	− 0.01	0.00	0.0	0	31	0	0	s.	S. H. Gerrish.
St. Helena	Napa	255	2	67.0	.....	103	21†	40	21	63	0.00	.....	0.00	0.0	0	28	3	0	.....	B. F. Kettlewell.
Salinas	Monterey	40	36	60.6	− 1.0	86	30	44	18†	36	0.00	− 0.02	0.00	0.0	0	28	3	0	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	18	76.7	+ 1.8	105	19†	45	14	52	0.03	− 0.15	0.03	0.0	1	18	13	0	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	39	67.8	− 0.9	82	24	58	13	15	0.05	− 0.07	0.05	0.0	1	26	5	0	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	39	56.5	− 1.5	79	29	48	31	24	0.00	− 0.01	0.00	0.0	0	13	14	4	w.	Do.
San Jacinto	Riverside	1,550	17	78.4	+ 2.4	106	26	46	14	51	0.00	− 0.10	0.00	0.0	0	19	12	0	w.	E. T. Tanner.
San Jose	Santa Clara	95	35	64.4	− 2.3	95	23	44	21	45	0.00	− 0.03	0.00	0.0	0	29	2	0	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Sanford.
San Luis Obispo	San Luis Obispo	201	15	62.2	− 1.3	88	23	43	29	40	0.00	0.00	0.00	0.0	0	23	8	0	nw.	U. S. Weather Bureau.
San Mateo	San Mateo	22	36	66.5	+ 1.3	88	23	56	11†	....	0.00	− 0.02	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	23	78.7	+ 5.8	104	25	50	17	....	0.00	− 0.05	0.00	0.0	0	28	3	0	.....	Do.
San Miguel Island	Santa Barbara	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Capt. W. G. Waters.
Sanger	Fresno	371	21	95.6	+11.2	114	1	80	31	...	0.00	− 0.03	0.00	0.0	0	.....	.....	.....	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	26	64.4	− 2.5	84	22	49	13†	30	T.	0.00	T.	0.0	0	28	3	0	w.	George W. Russell.
Santa Clara	Santa Clara	90	21	63.9	+ 0.2	96	23	41	21	51	0.00	− 0.04	0.00	0.0	0	31	0	0	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	37	58.7	− 5.8	91	29	40	21	50	0.00	− 0.04	0.00	0.0	0	25	1	5	w.	W. R. Springer.
Santa Magarita	San Luis Obispo	996	21	79.6	+10.5	98	22	60	7†	...	0.00	− 0.02	0.00	0.0	0	21	10	0	sw.	Southern Pacific Co.
Santa Maria	Santa Barbara	220	22	68.3	+ 3.4	84	25	54	10	22	0.00	0.00	0.00	0.0	0	31	0	0	w.	L. E. Blochman.
Santa Monica	Los Angeles	110	25	61.3	− 9.0	78	23	50	13†	23	0.00	− 0.03	0.00	0.0	0	27	2	2	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	21	63.2	− 2.7	97	22†	40	28	54	0.00	− 0.01	0.00	0.0	0	29	2	0	sw.	M. L. McDonald, jr.
Selma	Fresno	311	24	84.8	+ 1.7	102	6	69	31	...	0.00	0.00	0.00	0.0	0	31	0	0	nw.	Southern Pacific. Co
Shasta	Shasta	1,049	14	78.0	− 1.4	105	20	50	10†	47	0.00	− 0.06	0.00	0.0	0	31	0	0	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	13	73.8	+ 1.6	97	22†	52	17	35	0.00	− 0.07	0.00	0.0	0	29	0	2	s.	Mrs. A. C. Gregory.
Sierraville	Sierra	5,000	...	61.5	.....	94	22	28	28	60	0.00	.....	0.00	0.0	0	30	1	0	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	21	63.0	− 4.6	88	3†	37	29	48	0.00	− 0.15	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
Soledad	Monterey	188	36	72.6	+ 7.5	90	7†	51	3	...	0.00	0.00	0.00	0.0	0	31	0	0	n.	Do.
Southeast Farallon	San Francisco	30	7	52.6	.....	63	23	48	3†	10	0.00	.....	0.00	0.0	0	5	8	16	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	22	74.4	.....	98	23	44=	14†	50	0.00	− 0.05	0.00	0.0	0	31	0	0	sw.	Charles P. Jones.
Stirling City	Butte	3,525	6	68.4	.....	89	1†	48	29	38	0.00	.....	0.00	0.0	0	31	0	0	se.	Butte County R. R. Co.
Stockton (S. H.)	San Joaquin	23	39	70.8	− 1.7	98	23	50	11†	41	0.00	− 0.01	0.00	0.0	0	31	0	0	nw.	State Hospital.
Storey	Madera	296	10	77.4	0.0	105	6†	48	20	50	0.00	0.00	0.00	0.0	0	31	0	0	nw.	Santa Fe Co.
Suisun	Solano	20	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Summerdale	Mariposa	5,270	14	71.1	+ 5.6	90	7†	50	29	32	0.00	− 0.14	0.00	0.0	0	25	6	0	sw.	J. H. Lowry.

TABLE 1.—*Climatological data for August, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Summit	Placer	7,017	37	62.2	+ 1.9	89	23	32	30	48	0.00	− 0.05	0.00	0.0	0	31	0	0	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	21	67.8	− 2.9	95	22	38	29	50	0.00	− 0.12	0.00	0.0	0	30	1	0	w.	James Branham.
Tamarack	Alpine	8,000	4	59.0	.....	82	5†	31	29†	46	0.00	.....	0.00	0.0	0	31	0	0	sw.	William Bennett.
Tehachapi	Kern	3,964	33	77.1	+ 2.6	93	6	67	13†	....	0.00	− 0.11	0.00	0.0	0	....	....	....	.....	Southern Pacific Co.
Tehama	Tehama	220	39	84.5	+ 3.2	105	7	62	31	....	0.00	− 0.05	0.00	0.0	0	27	2	2	.....	Do.
Three Rivers	Tulare	870	....	78.4	.....	107	6†	49	29	47	0.00	.....	0.00	0.0	0	28	3	0	sw.	E. D. Barton.
Towle	Placer	3,704	24	69.8	+ 1.1	94	23	46	28†	43	0.00	− 0.12	0.00	0.0	0	28	3	0	s.	Southern Pacific Co.
Tracy	San Joaquin	64	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Ukiah	Mendocino	620	17	71.7	− 0.1	110	23	40	19†	64	0.00	− 0.01	0.00	0.0	0	31	0	0	nw.	Dr. George McGowen.
Upland	San Bernardino	1,750	13	73.0	0.0	97	22	47	16	41	0.00	− 0.01	0.00	0.0	0	19	12	0	w.	A. P. Harwood.
Upper Lake	Lake	1,350	25	72.4	− 0.8	103	23	46	27†	50	0.00	− 0.06	0.00	0.0	0	31	0	0	nw.	C. M. Hammond.
Vacaville	Solano	175	22	74.8	− 0.4	106	23	48	28†	50	0.00	− 0.04	0.00	0.0	0	21	10	0	sw.	G. O. Coburn.
Valley Springs	Calveras	673	21	77.0	− 1.3	103	23	60	1†	....	0.00	− 0.01	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Visalia	Tulare	334	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Warner Springs	San Diego	3,165	2	74.9	.....	96	19†	47	13†	39	T.	.....	T.	0.0	0	.....	.....	.....	.....	Mrs. E. F. Sanford.
Wasco	Kern	336	10	80.1	− 0.8	105	23†	53	5	46	0.00	− 0.02	0.00	0.0	0	31	0	0	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	14	57.2	− 5.6	75	5	38	18	32	0.00	0.00	0.00	0.0	0	2	27	2	se.	Spreckels Sugar Co.
Westley	Stanislaus	90	21	78.0	− 1.6	102	5†	51	18	....	0.00	0.00	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
Wheatland	Yuba	84	23	74.4	− 1.1	99	23	50	13	43	0.00	− 0.04	0.00	0.0	0	30	1	0	s.	Wm. Lumbard.
Willows	Glenn	136	31	76.2	− 4.4	102	5†	50	21	45	0.00	− 0.04	0.00	0.0	0	31	0	0	s.	M. T. Harrington, jr.
Yosemite	Mariposa	3,945	6	68.2	.....	99	11	38	27	56	0.00	.....	0.00	0.0	0	31	0	0	sw.	C. W. Tucker.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																															
Klamath Agency	Klamath																														0.00
Klamath Falls	...do																														0.00
Lakeview	Pitt							.01	.02	.01																					0.04
Long Valley	...do																														0.00
Merrill	Interior Drainage																														0.00
Yonna	...do																														0.00
California.																															
Aguanga	Coast																														0.00
Alameda	...do																														0.00
Alturas	Sacramento																														0.00
Anderson	...do																														0.00
Angles Camp	San Joaquin																														
Angiola	...do																														0.00
Antioch	...do																														0.00
Aptos	Coast																														
Arrowhead Springs	...do																														0.00
Auburn	Sacramento																														0.00
Avalon	Ocean																							T.							0.00
Azusa	Coast																														T.
Bagdad	Desert																														
Bakersfield	San Joaquin																														0.00
Barstow	Desert																														0.00
Bear River	San Joaquin																														0.00
Bear Valley (1)	Sacramento																														0.00
Bear Valley (2)	San Joaquin																														0.00
Bear Valley Dam	Coast																														0.00
Ben Lomond	...do																														
Berkeley	...do																														0.00
Big Bar	Sacramento																														0.00
Biggs	...do																														
Bishop	Owens																														0.00
Bishop Creek	...do																														0.00
Blocksburg	Coast																					T.	.25								0.25
Blue Canyon	Sacramento																														0.00
Blythe	Desert								T.																						0.00
Boulder Creek	Coast																			T.	T.						.10				0.10
Bowmans Dam	Sacramento																														0.00
Branscomb	Coast																														
Brawley	Desert																														0.00
Brush Creek	Sacramento																														
Burney	...do																														0.00
Butte Creek House	...do																														
Butte Valley	...do																														
Calexico	Desert																				T.										0.00
Caliente	San Joaquin																														T.
Calistoga	Coast																														0.00
Campbell	...do																														
Campo	...do																														0.00
Camptonville (near)	Sacramento																														0.00
Cedarville	Mountain Lakes																														0.00
Chester	Sacramento																														0.00
Chico	...do																														0.00
Chico (near)	...do																														0.00
China Flat	Coast																														0.00
Chino	...do																														0.00
Cisco	Sacramento																														0.00
Claremont	Coast																														0.00
Clear Lake	Klamath																														0.00
Cloverdale	Coast																														
Colfax	Sacramento																														0.00
Colgate	...do																														0.00
Colusa	...do																														0.00
Corning	...do																														0.00
Corona	Coast																														0.00
Crockers	San Joaquin																														0.00
Cuyamaca (1)	Coast																														
Daunt	San Joaquin								.08	T.														.01						T.	0.09
Davisville	Sacramento																														0.00
Deer Creek	...do																														0.00
Delta	...do																														0.00
Denair	San Joaquin																														
Descanso	Coast																														0.00
Dinuba	San Joaquin																														0.00
Dobbins	Sacramento																														
Dorris	Klamath																														0.00
Downieville	Sacramento																														
Dudleys	San Joaquin																														0.00
Dunnigan	Sacramento																							T.							T.
Dunsmuir	...do																														0.00
Durham	...do																														0.00
Dyerville	Coast																														0.00
Edgewood	Klamath																														
Edison	San Joaquin																														0.00
El Cajon	Coast																														
Electra	San Joaquin																														0.00
Elsinore	Coast																														0.00
Emigrant Gap	Sacramento																														0.00
Escondido	Coast																														0.00
Eureka	...do																												T.		T.
Fairmont	...do																														0.00
Farmington	San Joaquin																														0.00
Felton	Coast																														0.00
Firebaugh	San Joaquin																														0.00
Folsom	Sacramento																														0.00
Fordyce Dam	...do																														0.00
Fort Bragg	Coast																														0.00
Fort Ross	...do																														0.00
Fouts Springs	Sacramento																														0.00
Fredalba	Coast																														0.00
Fresno	San Joaquin																												T.		T.
Fruto	Sacramento																														0.00
Galt	San Joaquin																														0.00
Georgetown	...do																														0.00
Gilroy	Coast																														0.00

TABLE 2.—*Daily precipitation for August, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Gilta	Coast																																0.00
Glendora	...do																																
Glen Ranch	...do																																0.00
Glennville	San Joaquin																																0.00
Glenwood	Coast																																0.00
Gold Run	Sacramento																																0.00
Gonzales	Coast																																0.00
Grass Valley	Sacramento																																0.00
Greenville	...do																																0.00
Gridley	...do																																0.00
Groveland	San Joaquin																						T.										T.
Guinda	Sacramento																																
Hanford	San Joaquin																																0.00
Head Dam	Sacramento																																0.00
Healdsburg	Coast																																0.00
Hearst	...do																																0.00
Heber	Desert											.32																					0.32
Helen Mine	Coast																																0.00
Hesperia	Desert																																0.00
Holcomb	Coast											.55									.05			T.								0.60
Hollister	...do																																0.00
Hornbrook	...do																																0.00
Hot Springs	San Joaquin																																0.00
Hullville	Coast																																0.00
Idyllwild	...do										.13	08																					0.21
Independence	Owens																																
Indio	Desert							T.																							.08		0.08
Inskip	Sacramento																																0.00
Ione	San Joaquin																																0.00
Iowa Hill	Sacramento																																
Isabella	San Joaquin																																
Jacksonville	...do																																0.00
Jamestown	...do																																0.00
Jenny Lind	...do																																0.00
Johnsville	Mountain Lakes																																
Jolon	Coast																																0.00
Julian	...do																																0.00
Kennedy Mine	San Joaquin																																0.00
Kennett	Sacramento																																0.00
Kentfield	Coast																																0.00
Kernville	San Joaquin																																0.00
King City	Coast																																0.00
Knights Landing	Sacramento																																0.00
Knob	...do							T.																									T.
La Grange	San Joaquin																																0.00
Lake Eleanor	...do																																
Lakeside	Coast																																
La Porte	Sacramento																																0.00
Lathrop	San Joaquin																																0.00
Laurel	Coast																																0.00
Laytonville	...do																																0.00
Le Grand	San Joaquin																																0.00
Lemon Cove	...do																																0.00
Letter Box	Sacramento																																
Lick Observatory	Coast																																0.00
Livermore	...do																																0.00
Lodi	San Joaquin																																0.00
Lone Pine	Owens																																0.00
Long Camp	San Joaquin																																0.00
Long Valley	Mountain Lakes																																0.00
Lordsburg	Coast																																0.00
Los Alamos	...do																																0.00
Los Angeles	...do																							T.									T.
Los Banos	San Joaquin																																0.00
Los Burros Mine	Coast																																
Los Gatos	...do																																0.00
Los Vaqueros	...do																																
Lowe Observatory	...do																																0.00
Lytle Creek	...do																																0.00
McCloud	Sacramento																																
Macdoel	Klamath																																0.00
Madeline	Mountain Lakes																																0.00
Magalia	Sacramento																																0.00
Mammoth Tank	Desert																										.10						0.10
Mariposa	San Joaquin																																0.00
Marysville	Sacramento																																0.00
Mecca	Desert																													.05			0.05
Melones	San Joaquin																																0.00
Menlo Park	Coast																																0.00
Merced	San Joaquin																																
Merced Falls	...do																																0.00
Mesa Granda	Coast																																0.00
Mill Creek (1)	San Joaquin																																0.00
Mill Creek (2)	Coast																																0.00
Mills College	...do																																
Milo	San Joaquin																																0.00
Milton (near)	...do																																0.00
Modesto	...do																																
Mojave	Desert																																
Mokelumne Hill	San Joaquin																																0.00
Mono Ranch	Coast																																0.00
Montague	Klamath																																0.00
Monterey	Coast																																0.00
Monterio	San Joaquin																																0.00
Montgomery Creek	Sacramento																																
Monumental	Coast																																0.00
Morena Dam	...do																																
Mount Tamalpais	...do																																0.00
Mount St. Helena	...do																																0.00
Napa City	...do																																0.00
Napa (S. H.)	...do																																0.00
Needles	Desert		.32									.03																		.53		.05		0.91
Nellie	Coast																							T.									T.
Nevada City	Sacramento																																0.00

TABLE 2.—*Daily precipitation for August, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Newcastle	Sacramento																																0.00
Newhall	Coast																																0.00
Newman	San Joaquin																																0.00
Nimshew	Sacramento																																0.00
North Bloomfield	do																																
North Fork	San Joaquin																																
North Lakeport	Coast																																
Oakdale	San Joaquin																																0.00
Oak Grove	Coast							.02			.04																						0.06
Oakland	do																								•								0.00
Oakville	do																																0.00
Oceanside	do							.01																						T.			0.01
Ojai Valley	do																																0.00
Orland	Sacramento																																0.00
Orleans	Klamath				.																												0.00
Oroville	Sacramento																																0.00
Osena	Coast																																
Palermo	Sacramento																																0.00
Palm Springs	Desert																														.22		0.22
Parkfield	Coast																																0.00
Pasadena	do																																0.00
Paso Robles	do																																0.00
Peachland	do																																0.00
Penstock Camp	San Joaquin																																0.00
Peyton	Sacramento																																0.00
Phoenix Dam	San Joaquin																																
Pilot Creek	Sacramento																																0.00
Pine Crest	Coast						T.																	T.								T.
Pittville	Sacramento																																
Placerville	do																																0.00
Point Lobos	Coast																																0.00
Point Loma	do																							T.									T.
Point Reyes	do																																0.00
Polasky	San Joaquin																																0.00
Porterville	do																																0.00
Priest Valley	Coast																																
Quincy	Sacramento																																0.00
Red Bluff	do																																0.00
Redding	do																																0.00
Redlands	Coast																													T.			T.
Reedley	San Joaquin																																0.00
Represa	Sacramento																																
Rialto (near)	Coast																								T.								T.
Rio Vista	Sacramento																																0.00
Riverside	Coast																																0.00
Rocklin	Sacramento																																0.00
Rohnerville	Coast																																0.00
Sacramento (1)	Sacramento																																0.00
Sacramento (2)	do																																0.00
Saint Helena	Coast																																0.00
Salinas	do																																0.00
San Bernardino	do																																0.00
San Diego	do																													.03			0.03
San Francisco	do																													.05			0.05
San Jacinto	do																																0.00
San Jose	do																																0.00
San Leandro	do																																0.00
San Luis Obispo	do																																
San Mateo	do																																0.00
San Miguel	do																																0.00
San Miguel Island	Ocean																																0.00
Sanger	San Joaquin																																
Santa Ana River	Coast																																0.00
Santa Barbara	do								T.																								T.
Santa Clara	do																																0.00
Santa Cruz	do																																0.00
Santa Margarita	do																																0.00
Santa Maria	do																																0.00
Santa Monica	do																																0.00
Santa Rosa	do																																0.00
Sausalito	do																																0.00
Selma	San Joaquin																																0.00
Seven Oaks	Coast																																0.00
Shasta	Sacramento																																0.00
Shingle Springs	San Joaquin																																0.00
Sierra Madre	Coast																																
Sierraville	Mountain Lakes																																0.00
Sisquoc Ranch	Coast																																0.00
Sisson	Sacramento																																
Soledad	Coast																																0.00
Sonora	San Joaquin																																0.00
Southeast Farallon	Ocean																																0.00
Spreckels	Coast																																0.00
Squirrel Inn	do																																0.00
Stirling City	Sacramento																		T.														T.
Stockton (S. H.)	San Joaquin																																0.00
Story	do																																0.00
Suisun	Sacramento																																0.00
Summerdale	San Joaquin																																
Summit (1)	Sacramento																																0.00
Summit (2)	Coast																																0.00
Surrey	do																																0.00
Susanville	Mountain Lakes																																0.00
Tamarack	Sacramento																																0.00
Tehachapi	San Joaquin																																0.00
Tehama	Sacramento																																0.00
Three Rivers	San Joaquin																																0.00
Towle	Sacramento																																0.00
Tracy	San Joaquin																																0.00
Tulare	do																																
Tustin (near)	Coast																																0.00
Ukiah	do																																0.00
Upland	do																																0.00
Upper Lake	do																																0.00

TABLE 2.—*Daily precipitation for August, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																															
Upper Matole	Coast																														0.00
Vacaville	Sacramento																														0.00
Valley Springs	San Joaquin																														0.00
Ventura	Coast																														
Visalia	San Joaquin																														
Warner Springs	Coast																														0.00
Wasco	San Joaquin																														0.00
Watsonville	Coast																														0.00
Weaverville	Sacramento																														
Weitchpec	Klamath																														0.00
West Branch	Sacramento																														0.00
Westley	San Joaquin																														0.00
West Point	do																														0.00
West Saticoy	Coast																														
Wheatland	Sacramento																														0.00
Willows	do																														0.00
Woodleaf	do																														
Yosemite	San Joaquin																														0.00
Yuciapi	Coast																														

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																									
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	91	50	91	43	106	70	88	42	.....	.....	94	64	58	51	100	59	.....	.....	78	58	77	62	96	44	101	59	98	62
2...	96	47	91	41	105	69	91	47	.....	.....	97	66	57	50	103	66	.....	.....	79	60	83	70	95	46	106	62	101	70
3...	93	52	95	42	105	70	93	52	.....	.....	96	65	56	49	102	66	.....	.....	76	60	84	68	96	47	105	64	100	66
4...	90	51	89	44	103	69	91	44	.....	.....	95	62	59	51	101	64	.....	.....	76	58	81	65	92	47	104	63	101	64
5...	89	49	91	40	104	64	89	49	.....	.....	100	67	57	50	103	63	.....	.....	77	58	87	68	98	47	103	59	105	68
6...	87	47	90	41	106	68	89	48	.....	.....	97	67	57	51	107	70	.....	.....	79	58	83	67	96	48	109	65	100	71
7...	72	43	92	40	108	68	88	51	.....	.....	95	68	57	51	104	66	.....	.....	79	57	79	60	96	46	108	67	97	64
8...	75	42	93	42	104	69	88	53	.....	.....	91	66	58	51	101	61	.....	.....	77	60	71	58	96	45	103	60	96	62
9...	80	49	92	39	108	69	88	53	.....	.....	91	60	56	50	101	61	.....	.....	75	59	72	58	96	47	104	60	96	60
10...	82	50	90	40	100	67	86	52	.....	.....	91	60	56	50	100	62	.....	.....	74	59	73	63	96	47	103	63	96	61
11...	76	52	89	36	101	66	85	50	.....	.....	89	59	56	49	99	60	.....	.....	77	60	73	60	92	48	102	58	92	60
12...	79	46	87	39	102	68	84	44	.....	.....	87	62	58	51	97	61	.....	.....	80	59	72	59	92	42	100	59	93	59
13...	80	48	86	40	98	68	89	43	.....	.....	93	57	57	51	96	59	.....	.....	79	55	81	61	90	41	97	58	99	61
14...	85	50	85	38	97	67	88	43	.....	.....	93	60	58	50	98	64	.....	.....	76	56	81	62	95	46	101	56	98	67
15...	90	56	86	38	98	66	90	45	.....	.....	96	61	58	46	102	65	.....	.....	78	57	87	71	97	46	103	54	99	75
16...	91	52	84	40	99	65	93	45	.....	.....	93	63	59	47	98	64	.....	.....	77	58	75	44	93	47	101	63	95	72
17...	90	53	89	38	100	68	89	45	.....	.....	89	61	54	50	97	57	.....	.....	76	59	70	43	90	45	100	58	93	58
18...	89	51	92	35	108	68	85	43	.....	.....	94	61	55	49	101	58	.....	.....	80	56	75	54	95	44	100	59	96	60
19...	88	48	92	43	110	70	86	44	.....	.....	93	60	56	49	101	58	.....	.....	80	61	76	53	97	47	104	58	94	63
20...	90	49	90	34	108	74	88	41	.....	.....	94	58	56	49	100	60	.....	.....	82	63	74	64	95	45	103	59	96	62
21...	87	50	90	31	108	65	90	44	.....	.....	93	61	58	47	100	62	.....	.....	86	64	80	64	'94	43	103	64	98	59
22...	86	42	93	33	110	68	97	41	.....	.....	89	55	58	48	102	67	.....	.....	88	65	90	72	96	45	104	58	104	63
23...	89	41	91	35	112	74	96	51	.....	.....	99	58	61	47	107	67	.....	.....	90	65	89	65	98	48	108	64	102	68
24...	87	47	85	43	110	70	96	52	.....	.....	97	59	65	46	105	70	.....	.....	86	61	78	61	98	49	108	71	102	68
25...	90	42	96	43	110	70	80	47	.....	.....	93	59	54	48	104	67	.....	.....	83	59	85	68	95	50	105	69	98	64
26...	91	50	89	36	110	70	70	44	.....	.....	94	57	57	49	104	66	.....	.....	86	61	82	68	96	49	105	65	96	60
27...	100	60	83	31	107	68	78	40	.....	.....	97	58	55	51	100	64	.....	.....	87	61	74	63	92	43	103	60	92	60
28...	89	61	77	31	107	58	80	46	.....	.....	89	55	58	51	94	58	.....	.....	83	61	74	59	86	40	96	50	91	57
29...	99	61	78	25	105	53	84	47	.....	.....	94	60	60	49	93	56	.....	.....	78	50	81	63	89	39	98	53	92	65
30...	100	59	85	28	100	60	88	48	.....	.....	92	58	62	48	100	62	.....	.....	86	57	78	62	95	43	105	58	94	64
31...	97	62	84	35	106	60	89	49	.....	.....	91	56	58	50	100	61	.....	.....	90	63	80	62	93	44	109	58	92	61
Mns	88.1	50.4	88.5	37.5	104.9	67.1	87.1	46.5	.....	.....	93.4	60.7	57.5	49.3	100.6	62.7	.....	.....	80.6	59.6	78.9	61.8	94.4	45.7	100.3	60.1	97.0	63.7

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	95	58	89	51	72	63	61	50	79	49	75	50	75	53	82	43	85	46	90	52	82	43	89	49	97	48
2.....	93	57	95	55	70	62	58	49	78	52	72	50	73	59	84	42	87	47	91	54	82	40	92	47	98	47
3.....	91	57	86	54	70	63	55	48	75	50	70	50	70	58	75	44	88	46	87	56	84	45	94	52	96	44
4.....	92	53	89	52	70	63	58	49	78	49	68	49	70	56	82	48	87	43	86	53	84	44	92	52	94	47
5.....	66	53	95	56	69	61	64	51	84	48	76	51	71	55	87	44	86	44	97	56	87	47	93	50	95	48
6.....	98	56	95	57	69	60	60	51	84	46	79	50	71	56	87	42	86	42	92	58	82	42	92	51	94	47
7.....	93	57	84	53	70	60	57	50	76	48	75	52	70	55	76	43	87	46	86	53	81	49	90	49	96	43
8.....	90	59	87	50	71	63	59	50	80	49	70	51	69	56	76	48	87	43	86	51	82	41	90	48	95	47
9.....	90	57	87	51	70	64	59	51	76	48	71	52	69	54	72	48	87	41	86	51	81	38	89	50	96	47
10.....	90	56	84	51	70	64	58	50	77	49	72	53	67	56	71	47	88	40	82	51	78	40	89	51	98	46
11.....	91	60	81	49	72	63	57	49	73	48	72	52	73	57	69	47	81	42	82	50	78	43	86	49	99	44
12.....	93	58	81	50	73	61	56	49	74	49	70	50	75	50	75	49	82	52	83	50	80	36	85	46	97	47
13.....	93	55	90	50	71	58	60	51	81	50	70	50	72	49	80	45	79	50	84	50	76	38	89	51	96	46
14.....	91	49	95	58	69	58	67	52	83	47	70	50	68	57	87	44	78	47	85	51	82	41	88	48	93	43
15.....	89	49	98	60	70	61	63	52	86	47	71	50	70	57	90	46	77	42	88	52	80	50	88	47	92	41
16.....	90	50	83	55	70	62	64	52	83	53	72	52	70	53	76	43	83	42	86	52	82	44	83	46	90	42
17.....	95	51	85	52	71	60	64	52	78	50	73	53	72	50	75	52	82	41	83	52	80	42	87	48	91	46
18.....	97	55	91	53	72	61	60	52	75	50	73	47	78	49	77	49	81	42	85	52	79	40	89	44	94	44
19.....	100	63	87	52	73	64	62	52	75	51	71	52	75	55	74	50	83	43	87	52	80	40	88	53	90	42
20.....	101	67	87	52	75	64	59	51	71	48	71	50	80	56	71	42	83	40	85	52	80	44	87	47	94	41
21.....	99	67	95	49	79	64	64	50	83	44	80	48	80	55	87	44	86	42	81	50	85	41	91	45	93	40
22.....	101	65	99	58	78	65	75	51	91	47	84	50	84	54	97	43	85	43	96	69	85	51	95	45	93	39
23.....	97	65	102	61	81	67	78	55	95	50	88	48	79	55	97	45	85	42	98	6.	89	52	92	50	94	40
24.....	94	62	95	60	82	67	62	52	85	54	80	53	80	61	90	45	85	46	93	63	85	50	83	48	91	40
25.....	98	61	91	56	75	63	63	51	80	52	77	52	72	57	80	49	87	41	91	57	80	50	92	48	90	39
26.....	101	63	90	54	74	64	59	50	78	52	79	51	78	57	78	48	85	44	92	56	83	63	91	47	90	39
27.....	103	63	84	54	75	63	57	52	73	47	83	48	82	54	75	41	71	46	87	55	80	41	85	46	89	38
28.....	99	60	85	50	74	62	65	52	76	46	63	48	76	55	83	40	72	38	84	53	83	41	79	44	90	39
29.....	94	65	91	50	63	63	79	55	91	46	81	43	71	49	93	44	72	37	89	55	69	39	73	38	91	39
30.....	94	62	93	61	75	62	61	52	84	50	72	46	77	53	87	44	81	42	92	55	80	32	85	39	91	40
31.....	98	62	91	56	81	68	62	48	80	48	80	47	82	54	81	48	81	43	90	54	79	33	83	46	90	40
Means.....	94.1	58.8	89.9	54.2	72.9	62.7	62.1	50.9	79.9	48.9	74.6	49.9	74.2	54.7	81.1	45.4	82.8	43.3	87.9	53.8	81.2	43.2	88.0	47.5	93.3	43.2

Climatological Data for August, 1910.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL SUMMARY.

There has been a deficiency in precipitation in the Columbia Valley during every one of the last 6 months, and in many localities no rain has fallen for over 2 months. Out of a total of 346 stations in this district there were 162 that reported no rain in measurable quantities during the month of August. Such a drought is unprecedented, and it has caused the streams to become the lowest on record and the ranges to dry up and become bare of feed. The long dry spell was the means of promoting forest fires, which were more numerous than for many years, and they were not under control until near the end of the month, when a few small showers occurred that checked their spreading and cleared the atmosphere of smoke. The temperatures ranged below normal, and there were no damaging hot spells. The harvesting of the grain crop proceeded without interruption, and good yields were reported of fall sown grain, but the spring sown crop was light and in some places was nearly a failure.

TEMPERATURE.

The mean temperature, as determined from the records of 234 stations, was 62.7°, which is 2.8° below the district average. Only 3 stations reported means above the normal. The mean temperatures ranged between 52.4° at Pleasant Valley, in northern Montana, and 73.6° at Ephrata, in central Washington. The warmest sections were in the central portion of the Snake River Valley in Idaho, and in the Valley of the Columbia River in central Washington and north-central Oregon, where mean temperatures above 70° occurred. The coolest sections were in northwestern Montana and northwestern Washington, with mean temperatures of 53° at some stations.

The month was unseasonably cool throughout. The presence of much smoke in the atmosphere prevented the occurrence of the ordinary high maximum temperatures during the day, and also interfered with rapid radiation at night. The highest temperatures occurred generally during the latter part of the second decade, and the lowest were recorded generally from the 23d to the 25th, at which time frost formed east of the Cascade Mountains, and did some slight damage to tender vegetation. During this cool period at some stations the lowest recorded August minimum temperatures occurred. The highest recorded temperature was 110° at Vale, Oreg., elevation 2,450 feet, on the 11th, and the lowest was 10° at Alta, Wyo., on the 24th.

PRECIPITATION.

The average precipitation, as determined from the records of 346 stations, was 0.20 inch, which is 0.43 inch below the normal for the district. At 162 stations there was either no rain or only a trace of precipitation, and only 7 stations reported monthly amounts in excess of the normal. The heaviest rainfall occurred in northern Washington, northeastern Oregon, western Montana, and near the headwaters of the Snake River in southeastern Idaho and western Wyoming. In central and southern Oregon and southwestern Idaho the month was practically rainless. The rains of consequence occurred mostly from the 7th to the 16th, and during the last 3 days of the month.

The greatest monthly precipitation was 2.33 inches at Ophir, Mont., elevation 8,800 feet, and the greatest monthly snowfall was 10.1 inches at Bison Mountain, Mont., elevation 7,240 feet. The greatest 24-hour rainfall was 1.25 inch at Ophir, Mont., on the 29th, while amounts of 1.00 inch occurred at Ovanda, Mont., on the 29th, at Northport, Wash., on the 24th, and at Granite Falls, Wash., on the 31st.

THE RIVERS.

On account of the continued drought the Columbia River, together with its feeders and all other mountain streams in the district, was unusually low at the close of the month, and with few exceptions the mean stages were the lowest for August ever recorded. The mean stage at The Dalles, 9.4 feet, is the lowest in a record of 16 years, and at Portland the stage of 4.8 feet is the lowest in 17 years.

The Columbia River averaged 1.9 foot below the the normal for the month, being 2.3 feet below at Vancouver, 3.8 feet below at The Dalles, and 2.8 feet below at Wenatchee. Compared with the July mean stages, the average was 5.5 feet lower, the August stage being 4.1 feet lower at Vancouver, 5.6 feet lower at The Dalles, and 9.2 feet lower at Wenatchee.

The Willamette averaged 0.5 foot below the normal for August, ranging between 0.3 foot below at Albany and 1.8 foot below at Portland. This river averaged 0.8 foot below the July mean stage, being 0.1 foot lower at Salem, 0.4 foot lower at Albany, 0.5 foot lower at Wilsonville, and 3.7 feet lower at Portland. The stages at Portland are not strictly comparable with those of the other Willamette River stations on account of the effect of tidewater during periods when the water stages are low. In this instance, however, the greater difference is properly attributed to the effectsof back water from the Columbia during the preceding months.

Navigation on the Columbia was not interrupted during the month, and on the Willamette conditions remained about the same, the regular boats only going as far as Newberg, except that the last of the month the steamer *Oregona* began making trips to Mission, a few miles beyond the mouth of the Yamhill River.

The Snake River averaged 1.5 foot below the August normal, and was 1.5 foot lower than the mean stage for July, the stage at Lewiston, Idaho, on the 31st being 0.4 foot below the zero of the gage.

MISCELLANEOUS PHENOMENA.

Westerly winds prevailed over the district during the month; on the 24th and 25th a high pressure area of considerable strength moving southeast from British Columbia produced a strong east wind over the greater part of the district, carrying smoke and ashes from forest fires. A velocity of 42 miles from the west was recorded at Lewiston, Idaho, on the 22d.

The number of cloudy days was less than usual, but the amount of sunshine received was also below the normal, the discrepancy being due to the heavy pall of smoke that covered a large portion of the district during the latter part of the month.

Freezing temperatures occurred on the 24th and 25th at many places in the northern part of the district, killing tender vegetation; the staple crops, however, were not injured. Snow fell in western Montana and at high altitudes in northern Idaho on the 23d and 24th.

Few thunderstorms occurred and none of a destructive nature were recorded.

DRY SEASON IN IDAHO.

CHARLES A. DONNEL, Assistant Observer, Weather Bureau.

The State is experiencing a dry spell of unusual duration. Except in the northern part, where the deficiency in precipitation did not become marked till late in the spring, the dry spell may be said to have begun in March. At the close of August it remained unbroken over the greater part of the State.

Considering the State as a whole, the month of March, with one exception, was the driest since the beginning of authentic records in 1894; in April and May the precipitation was deficient by about 20 per cent; June broke all records for dryness during that month; in July the rainfall was less than one-half the normal; and August was the driest month of any name in the history of

the service in Idaho. The normal precipitation for the State for the 6 months beginning with March is 7.94 inches; during the current season the fall averaged 4.61 inches, which is but 58 per cent of the normal. The deficiency in moisture is most marked in the eastern part of the State where the fall has averaged less than 40 per cent of the normal. The table below gives for all stations in that part of Idaho included in District No. 12, and having a record covering 10 years or more, the total precipitation and departure from the normal, in inches, together with the percentage of the normal, for the 6 months from March to August, inclusive.

Station.	Precipitation, March to August, 1910, incl.	Departure from normal.	Percentage of normal.
	Inches.	*Inches.*	*Inches.*
Blackfoot	2.24	−2.83	44
Boise	3.37	−1.76	66
Cambridge	4.92	−1.79	73
Chesterfield	2.83	−4.67	38
Forney	4.90	−3.88	56
Garnet	2.13	−0.90	68
Idaho Falls	1.26	−5.75	18
Lewiston	5.52	−0.32	95
Moscow	6.33	−2.63	71
Payette	2.46	−2.01	55
Pocatello	3.41	−4.74	42
Porthill	5.72	−2.49	70

NOTES.

(Furnished by Section Director Edward L. Wells, Boise, Idaho.)

Rapid progress is being made on the work of widening and lining the main canal of the Payette–Boise Project of the U. S. Reclamation Service.

Owing to some difficulties that have arisen between the Grandview Land and Irrigation Company and the settlers under its canal, a receiver has been appointed for the company. It is announced, however, that an amicable agreement has been reached, and that money will be forthcoming to repair the dam on the Bruneau River, which has been out of commission during the present season.

Plans have been made to build the dam of the Crane Creek Irrigation Land and Power Company during the present year. When complete, the dam will create a reservoir of approximately 3,000 acres in extent, having a capacity of 70,000 acre-feet.

Work on the dam of the Idaho Irrigation Company on Wood River is progressing and it is expected that the structure will be completed during the present year.

The engineer in charge of the Salmon River Dam south of Twin Falls reports that the dam will be completed in November.

The state land board has granted the Twin Falls West End Company a delay of 5 months in the construction of its irrigation system.

The College of Agriculture of the University of Idaho, at Moscow, announces a course in farm engineering.

Some question having arisen as to the stability of the Lost River Dam, 5 miles above Mackay, Idaho, the state land board appointed a committee consisting of Daniel G. Martin, State Engineer; A. J. Wiley, of Boise, and J. H. Quinton, of Los Angeles, to make a critical inspection of the dam. The report of this committee, which was made public on September 10, states in substance that the foundation of the dam is insecure, and that to complete it according to the original specifications and fill it to its capacity would inevitably result in disaster.

Hon. Daniel G. Martin, State Engineer for Idaho, reports that, leaving out of the reckoning filings for less than 100 second-feet, there were applications for the appropriation of public waters to the number of 110 filed during the 3 months ending August 31. Of these 59 were for irrigation, 36 for power, 11 for irrigation and power combined, 2 for mining, and 2 for mining and power combined. These filings are from every county in the State, and include water from more than 50 streams.

REVIEW OF THE SPOKANE RIVER HYDROELECTRIC POWER PLANTS.

By J. C. RALSTON, Mem. Am. Soc. C. E.

OROGRAPHY.

The intermountain territory of northeastern Washington, northern Idaho, and the Rocky Mountain region of western Montana, all embraced between latitude 46° to 50° N., and longitude 113° to 119° W., was by a profound system of faulting and trenching subdivided into a large complex of separate mountain ranges. These ranges have a north-south, northwest-southeast course, conformable to the basal trenches which stamped the complex into its rather rude rhombohedral subdivisions. Such ranges as the Livingston, Big Belt, Galton, Flathead, Cabinet, and Bitterroot, together with the Cœur d'Alene Mountains and others are included within the dynamic folding of this interesting territory.

The great fault zones, which subdivided these ranges, were largely the great waterways of early geologic times; but part of them, after having served through a varied history, as valleys for lava flows, retreating ice escarpments, and mighty gravel depositories, finally terminated their Pleistocene eras in the power streams of to-day. Such streams, clearly, are the Columbia, Clark Fork, or Missoula, the Kootenai, the Flathead, the Spokane, and others. Great as were their dynamic offices in the misty past, their aggregate commercial power to-day will probably exceed one million horse. The altitudes of the rivers range from 1,000 to 2,000 feet above sea level, and the mountains rise from these levels up to 8,000 and 9,000 feet. The ranges generally, particularly those south of the International Boundary, are thickly forested. The pre-Cambrian slopes are steep on all the mountain sides, including those of the Cœur d'Alenes. The latter constitutes the drainage basin of the Spokane River. Considerable of this whole complex is characterized by extensive terraces of post-Tertiary gravels, so that in the case of either the steep mountain slopes or the level terraces, the forest cover has little effect on precipitation or its run-off.

These physiographic facts coupled with the meteorologic conditions of the entire region, lying as it does between the Columbia River plateaus and the high table-lands of the Rocky Mountain foothills, places the whole area strikingly within the purview of Dr. Willis L. Moore's recent classic on precipitation as affected by forest cover.

GENERAL FEATURES OF THE SPOKANE RIVER AND ITS CATCHMENT BASIN.

The catchment basin of the Cœur d'Alene Lake, which is the head of the Spokane River, lies between latitude 46° 45′ and 47° 45′ N., and longitude 115° 30′ and 117° 0′ W. It has an area of approximately 4,000 square miles. The basin is flanked on the east by the summit of the Bitterroot Mountains, and on the west by Cœur d'Alene Lake; the former at altitudes of from 6,000 to 8,000 feet, and the latter at 2,122 feet. There are but two water courses, with their several branches, that drain the entire area. Both discharge into the lake. The whole district is mountainous, and much of it rugged. The two rivers, the St. Joseph and the Cœur d'Alene, flow through comparatively narrow valleys —from one-quarter to two miles in width. These streams on the lower stretches for about the last 30 miles have level gradients, and are virtually arms of the lake. They are regularly navigated by the largest steamboats on the lake. With the exception of narrow strips of a levee-like nature 200 to 300 feet wide, comprising the banks of each river, the valley land up to the head of navigation is a low worthless marsh. At low water both valleys are covered with marsh grass, sedge, tules, and cattails, interspersed with bunches of willow and cottonwood. At high water they are inundated. Much of the flood water remains standing on the marshes until it has been carried off by evaporation, while the main channel of the rivers within the same period drops 4 to 6 feet. The higher banks of the chan-

nels impound the flood waters and retain them from promptly draining into the rivers. Thus a measurable percentage of the flood water is lost to storage.

The mountains have generally a heavy forest growth. The precipitation varies from 24 to 36 inches, depending on altitude above sea level. Cœur d'Alene Lake has a low water area of about 42 square miles and a high water area of perhaps 50 square miles. It occupies an ancient river valley, corresponding to a zone of trenching or faulting as already outlined. Mr. F. L. Ransome, of the United States Geological Survey, in his report on the geology of the Cœur d'Alene District (Professional Paper No. 62), says this ancient valley was filled in part by Miocene basalt, was afterwards recut by the original river, leaving terraces on the old slopes, and was finally dammed on the north by deposits of Pleistocene gravels. These gravels were probably transported southward along a line of faulting in which the ancient river flowed from the retreating ice front, finally forming the lake and backing up the water of the Cœur d'Alene and St. Joseph rivers.

At the north end of the lake these foregathered waters discharge themselves into the Spokane River. Thence this river courses in a northwesterly direction to its confluence with the Columbia River. From the lake to Spokane the river has a gradient varying from 4 to 6 feet per mile, excepting at Post Falls, 9 miles below the lake, where there is a shear drop of 50 feet. This reach of the river is bordered on both sides by a beautiful, fertile valley of water-worn and glaciated gravel having a rich, but rather thin, layer of top soil which responds plenteously to irrigation. This part of the valley is underlaid by a water-bearing stratum, the gradient of which is about one-half that of the adjacent river. This is the source from which nearly all the orchards, truck gardens, and other irrigated tracts pump with electricity their water supply. The Idaho–Washington State Line is midway between Spokane and Post Falls.

At Spokane the river emerges from the western slopes of the international foothills and enters the broad lava plains of the Columbia Valley. Here it tumbles over a narrow tongue of lava, dropping 134 feet in a distance of 1,500 feet, and continues through a deep narrow valley, dropping 890 feet in the remaining 7½ miles of its length. This remarkable head is absorbed by a series of 5 principal sharply inclined rapids, at each one of which power is or can be developed under heads varying from 50 to 80 feet. Along the intervening stretches the gradients are much gentler and afford reaches in which possibly 3 substantial forebay pondages can be developed and where 2 already exist. The flow below Spokane is augmented by Latah Creek, the Little Spokane, and other minor streams which add from 5 to possibly 10 per cent to the low-water flow.

The valley from Spokane to the mouth of the river varies from one-half to 2 miles in width and is characterized by gravel terraces of varying depths up to 150 feet, while remnants of the older terraces are found still clinging to the basaltic hillsides. Near its mouth the river has cut through the Columbia River escarpment, so that the canyon walls are from 1,200 to 1,800 feet high.

RUN-OFF.

The lowest run-off known is equivalent to 0.3 second-foot per square mile of drainage area, or 1,200 second-feet for the whole Cœur d'Alene Basin, while the greatest seems to have been as much as 13 second-feet per square mile, or a total of 52,000 second-feet.

A dam was built at Post Falls on the Spokane River many years ago and used for driving a flour mill until 1905, when the site was acquired by the present owners. The works were reconstructed in 1906 upon modern lines and provided with weir, sluice, and flume openings of greater discharge capacity than existed in the old works, so that not only could a greater flood be discharged, but the extreme peaks of the floods were reduced below those prevailing prior to the new construction. With this dam in commission the lake became an ideal and very unusual impounding reservoir. Sufficient of the flood waters could be stored to raise the low water run-off from 1,200 second-feet to 2,000 second-feet—an increase of 66⅔ per cent for power purposes, plus 50 second-feet previously preempted for irrigation purposes. There is a fall in the Spokane River from the lake to the crest of the dam during high water of from 4 to 8 feet depending upon the stage of the high water. Hence it follows that no impounding due to the dam takes place, other than that which formerly existed, until the stage of the lake has dropped to the elevation of the crest of the dam, which is 2,126.6 feet in elevation. The water is held at this elevation by the regulating devices at Post Falls until the supply coming into the lake drops to the demand flow. The total pondage is then drawn upon. Fortunately the storage has so far proven sufficient to maintain the 2,000 second-feet flow until the November floods. The spring floods generally begin in April and seldom exhaust themselves until July.

EXTRANEOUS RESULTANT BENEFITS.

The building of the regulating works at Post Falls, aside from securing the desired increase of flow for the power installation at that point, results in an equal benefit to all the other plants now in operation or hereafter to be built on the lower reaches of the river. Happily, the greatest beneficiary is the city of Spokane. This city secures its water supply from a water table whose stage and supply are both dependent upon the stage and supply of the adjacent Spokane River. In addition to this the city pumps its water with hydraulic power generated by the river at the pumping works. The two-thirds increase in the flow of the river over and above the flow prior to the Post Falls improvement added a timely and very economical increase of power to the overworked pumps. Even with this augmented power the demand upon the supply has outgrown the total power capacity at the pumping plant, and the city has recently installed additional pumps which demand 2,000 horsepower from the Post Falls plant. Hence any scarcity of water or other malign condition at Post Falls involves, of necessity, not only the city's most vital welfare, but the Post Falls plant as well, also the entire tandem of plants below. Such scarcity would also reflect disastrously over the immense interstate territory served. From the combined switchboards on the river there will be vibrating this year 113,000 horsepower serving a total population of more than 250,000, scattered over a territory equal to that of the State of Massachusetts. With a field as large and diversified as this, interstate in its character, with industries and irrigation works wholly dependent upon electrical energy, any threatened or real menace at the one vulnerable vital point—the storage reservoir—would take on a profoundly serious aspect involving not alone a great fire hazard in the city of Spokane, but the industries, necessities, comforts, and rights of a commonwealth.

OUTLINE OF PLANTS.

The following is a brief outline, in physical sequence, of the 4 hydroelectric power plants on the Spokane River:

Post Falls.—The plant at Post Falls is the keystone installation of the series. It is located at a natural fall of 50 feet, where the river has divided itself into 3 channels, in each of which a precipitous fall exists and its operation constitutes the regulation of the river below. Extensive and permanent controlling works have been installed in each channel with a mid-stream type of power house constructed under the dam of the middle channel. The outline drawing succinctly illustrates the character of this plant. A concrete dam forms the up-stream wall of the power house and contains the feeder pipes, sliding head gates with their lifting devices, trash grizzlies, and screens. The power house contains five pairs of center discharge, 64½-inch Francis turbines, with horizontal shafts of 3,260 horsepower at

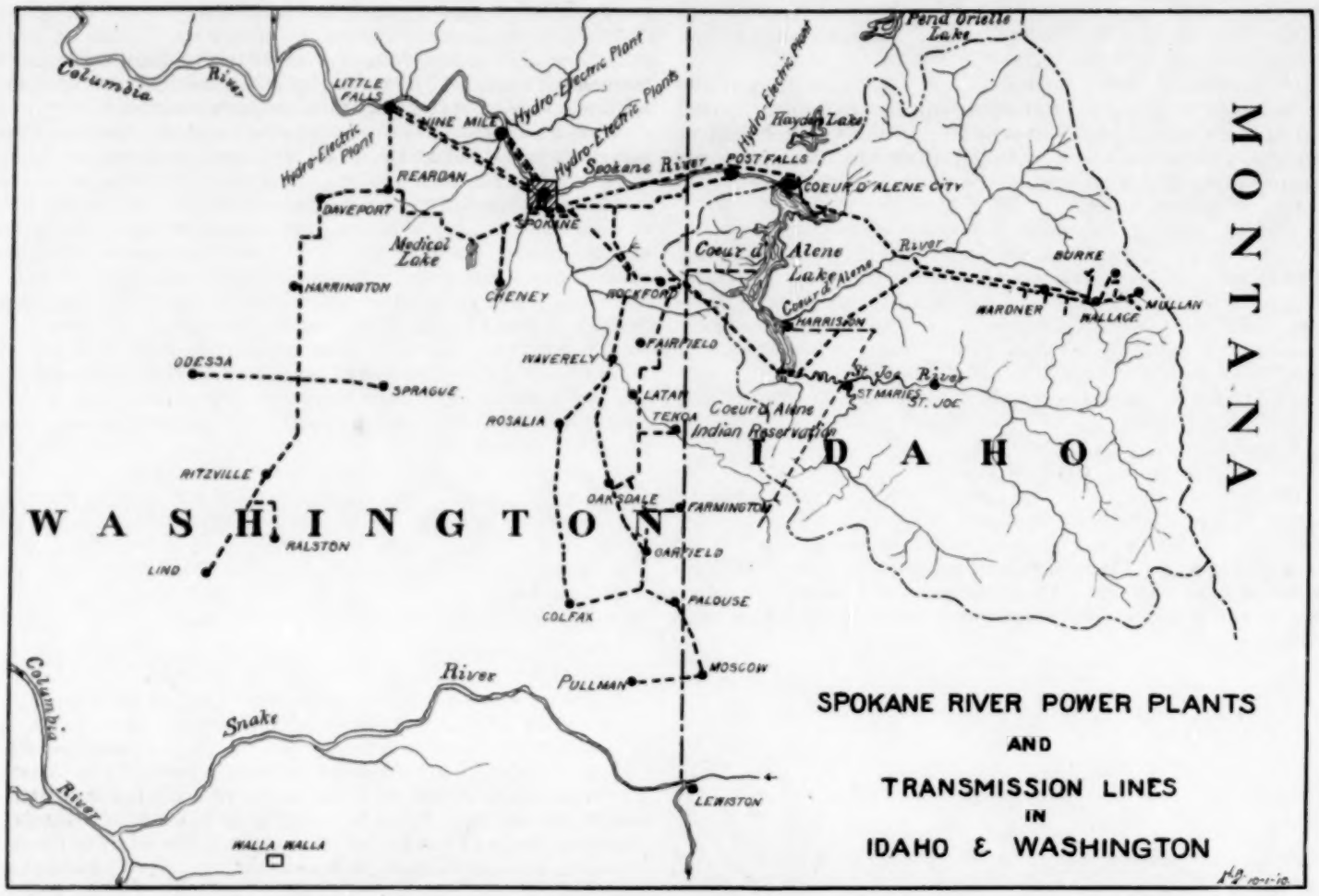


FIG. 1.

an efficiency of 80 per cent on a gate opening from 0.7 to 1.0, and an effective head of 50 feet.

Four of the wheels were built by the Platt Iron Works and one by the I. P. Morris Company. The extension of the wheel shafts carries alternating current, 2,250-kilowatt, 3-phase, 60-cycle generators, wound for 2,300 volts. They are the revolving field type and run at a speed of 138 revolutions a minute. A further extension of the shafts of four of the machines accommodates direct-connected overhung exciters. Exciters are 60 kilowatts at 125 volts, each capable of serving two alternators. The transformers are the usual oil-water type 2,300/60,000 volts, each inclosed in a brick cell with steel roller doors. Selector knife switches with transfer bus make it possible to operate directly through the individual transformer or through any other transformer of the generating units. A Tirrill regulator serves an important function in compensating the fluctuations arising from the varied load of induction motors, mine hoists, street and interurban railways.

The controlling works permit a maximum storage of 6.5 feet on Cœur d'Alene Lake, and at the same time afford a freer discharge of flood waters than existed in the old works, which had been in operation many years prior to the building of this plant.

In the south channel a concrete dam 78 feet long contains 6 gates, 6 feet wide by 13 feet high, and a spillway 42 feet long. The raising apparatus is hand operated because these gates are opened and closed but once a year. The north channel contains the principal controlling works. These consist of seven sluiceways 21 feet wide, one log sluice 12 feet wide, each rigged with combination wood and iron Taintor gates, having heavy counterweights to facilitate hand operation. In addition to these eight openings there is a main sluiceway 110 feet long controlled by a bear-trap Parker gate. This gate is operated by hydraulic force secured through tunnels in each pier, the lifting force being derived from the pressure due to the difference between the static head at the upstream inlet of the piers and the head acting directly over the gate.

The Post Falls plant is connected with the down-river plants by two separate 60,000-volt circuits. One is a direct tie, and the other has branches running to the greatest lead-producing district in the world 100 miles distant on one circuit and 65 miles on a second circuit. Also a branch to the Palouse country for the operation of flour mills and other power purposes as well as for lighting. An additional 60,000-volt line 120 miles long delivers energy to Spokane through the other plants, to the territory west of the city in the so-called "Big Bend" country.

Spokane Falls.—The pioneer plant is the one at the Spokane Falls, in the center of the city. This plant was constructed in 1892, but has received substantial additions from time to time since. Although there are 134 feet of fall available within a distance of 1,500 feet, 70 feet is the head under which this plant is operated. The water is led from a timber crib, 10 feet high, by three 10-foot and two 7-foot steel penstocks, 550 feet long, to a power house on the south bank of the river at the foot of the falls. Here are installed Francis inflow turbines, direct connected to two 2,250-kilowatt alternating current, 4,000-volt generators, one 750 direct-current, 600-volt, railway generator, one 1,200-kilowatt, 600-volt, railway generator, one 750-kilowatt, one 1,200-kilowatt, and two 200-kilowatt, direct current, 300-volt,

light and power generators. This plant furnishes much of the energy used for municipal and commercial lighting, for local power, and street railway service.

A commentary worthy of note is that this plant, in conjunction with the Post Falls installation, furnishes all of the power used at the shops of the Northern Pacific and Great Northern railways. Those railways, with all their facilities for cheap transportation of coal at cost, and with their own coal mines in western Washington and central Montana, find it more economical to purchase energy than to generate it themselves by steam. In a similar economic equation the writer was commissioned about two years ago by the city of Spokane to investigate the advisability of installing a municipal lighting and power plant. After a careful inquiry into all conditions, even with a power site in hand, it was found that such a plant could not compete with the existing privately owned plants.

The pioneer Spokane plant, as heretofore suggested, uses only 70 feet of the 134 feet inherently in the falls. A new plant, however, contemplating the use of the entire falls, is in process of development. This plant when completed will no doubt retire the present lower-head plant. The new plant will be installed under a head of 148 feet. It will involve the installation of four 10,000-kilowatt, alternating current, 4,000-volt, generators, each direct connected to an 18,000-horsepower, single-runner, vertical Francis inflow type turbine. These turbines will be mounted in a vertical wheel pit, and discharge into a tail-race tunnel having a sectional area of 507 square feet, and a length of approximately 2,000 feet. This tunnel will undercut the entire falls, while the collar of the pit will receive the water from a forebay intake at the head of the falls. This plant will feed into the present distribution system of the city with its proposed extensions.

Nine-Mile plant.—This plant is located on the Spokane River about 12 miles below the city. Its type is substantially the same as the mid-stream plant shown in cross section as constructed at Post Falls, except that the power house stands at the west shore end, but under the dam. It is owned by the Inland Empire Railway. This railway operates an extension system of traction lines in the city of Spokane, also a passenger and freight line from Spokane to Cœur d'Alene City and Hayden Lake, Idaho, together with a similar, but a 25-cycle single-phase, line into the Palouse country. Both these lines serve as heavy freight feeders to Spokane. The single-phase feature which applies to the Palouse division only has perhaps been the first successful application to a heavy line in the United States, and has attracted a great deal of technical attention.

The Nine-Mile plant operates under a head of 60 feet and draws its energy from an impounding forebay embracing about 5 miles of the Spokane River. It has installed four 3,750-kilowatt, R. F. type Westinghouse, 2,200-volt generators. These generators are direct connected to horizontal Holyoke turbines. They discharge through the usual step-up apparatus, feeding two 60,000-volt circuits, transmitting to the Spokane frequency

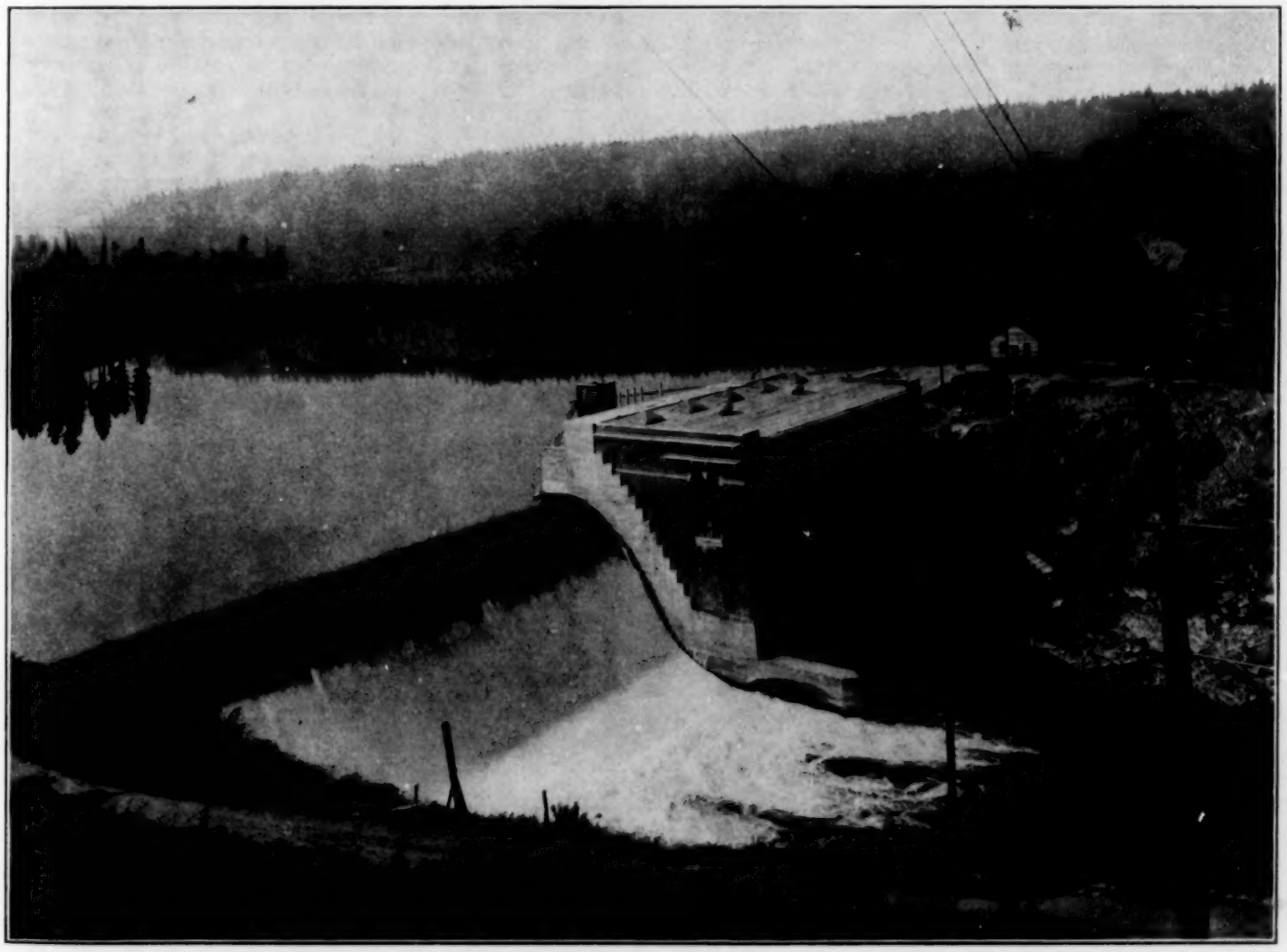


FIG. 2.—General view of the Nine-Mile hydroelectric plant, 12 miles below Spokane.

changers, and thence as 25-cycle energy at 45,000 volts to the line substations for final reduction on the single-phase line. This plant was built under contract by Messrs. Sanderson & Porter in 1908. In addition to its railway and lighting loads it supplies 2,600 horsepower to irrigation pumps in Idaho.

Little Falls plant.—This plant is located about 45 miles below Spokane on the Spokane River, and is of the same type as the Keystone plant at Post Falls. The water will be fed under a 68-foot head through four 16-foot steel flumes about 60 feet long. There are now being installed four 5,000-kilowatt, 4,000-volt alternating current generators, direct connected to four 9,000-horsepower, horizontal, inflow type, twin Francis turbines. This plant will have one double circuit, steel-tower line serving as a main tie to Spokane, and a single circuit cedar pole line feeding into the "Big Bend" country west of Spokane as well as into the city.

OTHER SITES.

There is a possible site for about 2,000 to 3,000 horsepower at a point about 7 miles above Spokane; but this site will involve such heavy cost for dam construction it is alleged that its economic feasibility may require special conditions to justify its construction.

At the up-river pumping station, 4 miles above town, the city of Spokane has developed an hydraulic plant of 3,000 horsepower capacity under a head of 19 feet, for the pumping of a part of its domestic water supply; and 2,000 horsepower additional has just been installed, the energy for which is furnished by the Post Falls station. The city's plant was built in 1896, with some additions since that time.

About midway between the Nine-Mile and the Little Falls plants is a possible site with a head of perhaps 60 feet, possibly 70 feet, capable no doubt of generating 10,000 horsepower, though this, together with the two sites yet to be mentioned, does not possess the economical features for construction enjoyed by the present plants, such sites necessarily lagging for the time when there will be a more imperative demand.

Between the Little Falls plant and the mouth of the Spokane River there are still two additional sites, one with a probable head of 75 feet and one with a head of about 85 feet, capable of delivering 10,000 and 11,000 horsepower, respectively.

TOTALITY OF POWER.

From the preceding resume it will be seen that along the entire length of the river, a distance of 108½ miles, with a low-water flow of 2,000 second-feet there can probably be developed within possible commercial limits a total of from 147,000 to 150,000 delivered horsepower, exclusive of an 18,000-horsepower steam auxiliary now built in Spokane. Of this amount there is now installed or in process of installation a total of 113,000 horsepower. The total theoretic head in the river is 1,140 feet, and of this total it is possible to utilize probably 80 per cent.

POTENCY OF INFLUENCE.

The rivers enumerated in the original subheading of this short review have many characteristics in common with the Spokane River. Where the other streans lack the amount of fall they make up in quantity of flow, and so in many respects both the rivers and the valleys are comparable in physical and other features; but in none of the valleys has there been even a rude approximation to the industrial, commercial, and agricultural development that has marked the Spokane Valley and its tributary fields. Next to the building of the railroads into the Spokane country, the most potent influence on the commercial and interstate development of the region has been these power projects. It is not a venturesome assertion to state that in no territory in the West has regional development and power development gone forward with such intimate correlation and rapidity. In the past 15 years the city of Spokane and its adjoining territory has increased fourfold in population and eightfold in wealth. These power undertakings have been such remarkable fostering agencies that it is hardly a fanciful anachronism to assert that industrial development has synchronized with power development instead of the power development keeping pace with industrial demands. Such a policy has been as constructive to the region as the government's Pacific railroad policy of 30 years ago was constructive to the national development.

These power projects have mightily quickened urban and interurban interchange and traffic; accelerated garden, orchard, dairy, and general farming, and given a powerful stimulus to industrial exploitation, not only in Washington, but in Idaho also.

TABLE 1.—*Climatological data for August, 1910. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,300	9	58.8	.....	91	19	23	25	47a	0.55	− 0.19	0.27	1.2	6	.....	.....	.....	.....	C. D. Demond.
Bison Mountain	Powell	7,240	1	.....	.....	.....	.....	.....	.....	.....	1.03	.....	0.35	10.1	5	18	7	6	.....	C. H. Anderson.
Butte	Silver Bow	5,716	15	61.2	− 1.6	88	19	27	25	45	0.77	− 0.09	0.50	T.	3	17	6	8	nw.	J. R. Wharton.
Columbia Falls	Flathead	3,100	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. I. M. Kennedy.
Como**‡	Ravalli	.....	2	62.6	.....	88	4†	30	25	40	0.85	.....	0.34	1.0	4	28	3	0	.....	Hiram Platt.
Dayton‡‡	Flathead	2,800	6	59.6	.....	89	11	28	25	44	1.06	.....	0.75	0.0	4	.....	.....	.....	.....	Charles Frost.
East Anaconda‡	Deer Lodge	5,500	5	59.8	.....	88	4	28	24†	50	0.44	.....	0.24	1.2	6	14	14	3	w.	C. D. Demond.
Fortine	Lincoln	2,975	4	55.8c	.....	91	19	24	25	57c	0.68	.....	0.28	0.0	5c	7c	7c	14c	w.	Mike Petery.
Hamilton	Ravalli	3,575	7	62.4	.....	90	10	32	24	40	0.80	.....	0.30	2.4	3	26	3	2	n.	Bitter Root Valley Ir. Co.
Hat Creek	Powell	6,000	1	.....	.....	.....	.....	.....	.....	.....	0.84	.....	0.50	5.5	4	9	14	8	w.	M. K. Landreth.
Kalispell	Flathead	2,965	11	59.1	− 3.8	86	19	30	25	41	0.67	− 0.22	0.60	0.0	3	10	15	6	w.	U. S. Weather Bureau.
Lost Creek	Deer Lodge	5,200	.....	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.60	0.2	1	23	6	2	w.	Frank Henault.
McGinnis Meadows	Lincoln	.....	.....	56.6	.....	89	10	23	25	56	0.17	.....	0.14	0.0	3	18	8	5	nw.	H. L. Beebe.
Missoula	Missoula	3,225	32	62.4	− 0.5	93	19	29	25	50	0.57	− 0.35	0.35	.....	2	.....	.....	.....	sw.	U. S. Weather Bureau.
Ophir	Powell	8,800	1	.....	.....	.....	.....	.....	.....	.....	2.33	.....	1.25	T.	3	21	5	5	w.	E. S. Wilton.
Ovando	...do	4,207	10	53.5	− 4.7	85	4†	21	25	52a	2.07	+ 1.15	1.00	0.0	3	0	31	0	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	7	59.1	.....	92	19	21	25	56	0.57	.....	0.30	T.	2	24	2	5	sw.	G. T. Bramble.
Plains	Sanders	2,475	12	66.2	− 1.8	91	10	32	25	40	1.04	+ 0.14	0.70	0.0	2	29	1	1	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	3	52.4	.....	90	19	15	25	64	0.12	.....	0.10	0.0	2	21	10	0	.....	A. D. Stillman.
Polson	...do	2,920	2	62.8	.....	91	1†	31	25	40	0.22	.....	0.22	0.0	1	.....	.....	.....	.....	F. P. Brown.
St. Ignatius	Missoula	2,700	4	61.0	.....	91	20	27	25	48	0.64	.....	0.50	0.6	3	23	5	3	nw.	U. S. Reclamation Service.
St. Regis	...do	2,650	2	60.0k	.....	92	9	28	17	63	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. D. Lee.
Saltese	...do	3,600	6	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	31	0	0	s.	E. K. Tarbox.
Snowshoe	Lincoln	4,500	4	57.0	.....	82	19	27	24	34	0.23	.....	0.16	2.1	2	21	4	6	sw.	J. C. Riter.
Troy	...do	1,880	14	62.4	− 0.5	92	8	30	27	48	0.50	− 0.37	0.50	0.0	1	13	1	5	w.	W. E. Milnor.
Upper Lake McDonald	Flathead	3,200	2	59.0	.....	89	9	31	25	46b	0.10	.....	0.10	0.0	1	7	8	14	s.	F. F. Liebig.
Willow Glen Stock Farm‡	Deer Lodge	.....	1	57.3	.....	89	19	22	24	47	0.16	.....	0.08	T.	3	12	16	3	nw.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	6	58.4	− 1.9	87	20	16	25	58	0.60	− 0.79	0.48	0.0	2	29	2	0	.....	A. U. Call.
Alta	...do	7,000	1	55.5	.....	84	19†	10	25	62	0.12	.....	0.12	0.0	2	21	8	2	sw.	Mrs. Lucy Brown.
Bedford	...do	5,900	10	57.4	− 1.4	87	26	16	25	59	0.44	− 0.91	0.27	0.0	3	26	5	0	w.	C. G. Heiner.
Snake River	Yellowstone Park	7,000	4	53.2	.....	85	19	12	25	58	0.10	.....	T.	1	1	22	9	0	w.	U. S. Army.
Nevada.																				
San Jacinto	Elko	.....	5	59.6	.....	91	10	24	25	51	T.	.....	T.	0.0	0	26	5	0	sw.	Moses Jones.
Utah.																				
Standrod	Boxelder	.....	6	67.4	.....	87	4†	34	25	40a	0.64	.....	0.22	0.0	5	24	6	1	.....	T. B. Jones.
Idaho.																				
Albion	Cassia	.....	9	64.0	.....	95	18	23	25†	63	0.33	.....	0.32	0.0	2	24	2	5	w.	G. A. Axline.
Almo	...do	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. L. Eames.
American Falls	Oneida	4,341	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. H. Barber.
Blackfoot	Bingham	4,503	15	62.6	− 4.3	94	20	23	25	56	T.	− 0.72	T.	0.0	0	27	4	0	sw.	E. A. Dowd.
Blackfoot Dam	...do	.....	2	58.8	.....	89	19	20	25	54	0.24	.....	0.22	0.0	2	25	6	0	w.	N. W. Irsfield.
Bock's Ranch	Elmore	3,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Bock.
Bogus Creek	Boise	4,200	.....	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	29	2	0	.....	F. P. Ingraham.
Boise	Ada	2,739	25	68.8	− 3.0	99	19	43	25	43	0.00	− 0.16	0.00	0.0	0	31	0	0	nw.	U. S. Weather Bureau.
Bonners Ferry	Bonner	1,850	.....	60.5	.....	94	19	28	24†	51	0.49	.....	0.31	0.0	5	19	9	3	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	31	0	0	.....	Patrick Moriarty.
Buhl	Cassia	3,800	5	73.0i	.....	99	10	37	30	48i	0.00	.....	0.00	0.0	0	.....	.....	.....	w.	H. J. Idema.
Burke	Shoshone	4,082	4	54.5	.....	88	18	27	25	51	0.05	.....	0.03	T.	2	18	11	2	sw.	W. Alvin Hall.
Caldwell	Canyon	2,372	6	66.2j	.....	97	10	35	30	49j	0.00	.....	0.00	0.0	0	27	4	0	w.	Prof. Wm. J. Boone.
Camas	Fremont	4,815	2	63.0b	.....	97	19	20	25	56b	0.00	.....	0.00	0.0	0	.....	.....	.....	sw.	Mrs. Edna Faulkner.
Cambridge	Washington	2,651	14	67.6	− 3.3	104	19	31	25	58	T.	− 0.42	T.	0.0	0	.....	.....	.....	w.	Chas. H. Shepherd.
Cedar Creek Dam	Twin Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	26	0	5	nw.	H. R. Collins.
Chesterfield	Bannock	5,424	15	59.9	− 0.3	91	5	11	25	66	0.72	− 0.34	0.40	0.0	3	18	12	1	.....	Chas. S. West.
Coeur d'Alene	Kootenai	2,157	20	65.2	− 1.6	92	19†	32	25	46	0.00	− 0.50	0.00	0.0	0	29	1	1	.....	Jos. T. Scott.
Cottonwood Creek	Boise	4,000	.....	.....	.....	.....	.....	.....	.....	.....	0.01	.....	0.01	0.0	1	20	0	1	.....	Frank Hedrick.
Crawford	...do	4,300	.....	60.0	.....	96	19	22	25	60	T.	.....	T.	0.0	0	28	1	2	sw.	Mrs. Gertrude Kerby.
Culdesac	Nez Perce	1,520	3	64.0	.....	98	18	35	25†	49	T.	.....	T.	0.0	0	26	0	5	.....	R. R. Richmond.
Deary	Latah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. M. Call.
Dent	Nez Perce	1,350	6	64.0	.....	100	9	32	26	58	0.02	.....	0.02	0.0	1	24	7	0	.....	Emil Schuessler.
Driggs	Fremont	6,097	3	58.8c	.....	87b	12†	25	25	52b	0.05	.....	0.05	0.0	1	16	12	3	sw.	Walter H. Durrant.
Edie	...do	.....	2	59.4	.....	87	22	20	25	49	0.00	.....	0.00	0.0	0	31	0	0	s.	Geo. B. Edie.
Edwardsburg	Idaho	4,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Edwards.
Emmett	Canyon	2,350	4	66.0	.....	102	19	36	27†	53	0.00	.....	0.00	0.0	0	31	0	0	nw.	C. P. Kar.
Flowers	Blaine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Forney	Lemhi	.....	13	57.8	− 1.4	97	4	19	25	62	0.15	− 0.50	0.15	0.0	1	15	9	7	sw.	M. B. Merritt.
Garden Valley	Boise	3,600	4	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	29	2	0	w.	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	11	74.1	− 3.3	106	19	41	30	51	0.00	− 0.09	0.00	0.0	0	.....	.....	.....	e.	Asa A. Kenison.
Glenns Ferry	...do	2,569	3	70.4	.....	105	19	32	30	59	0.00	.....	0.00	0.0	0	31	0	0	nw.	I. E. Perkins.
Gooding	Lincoln	3,572	2	67.2	.....	98	9†	34	30	55	0.00	.....	0.00	0.0	0	31	0	0	w.	John Krall, jr.
Grand Forks	Shoshone	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Kottkey.
Grandview	Owyhee	.....	2	69.8	.....	103	19	32	25	57	0.00	.....	0.00	0.0	0	31	0	0	nw.	N. G. Massey.
Grimes Pass	Boise	5,200	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	.....	.....	.....	.....	Joseph M. Clarke.
Guffey	Owyhee	2,381	2	73.4	.....	101	9†	44	25†	50	0.00	.....	0.00	0.0	0	31	0	0	w.	Fred Perry.
Hailey	Blaine	5,347	7	65.0	.....	96	20	32	25	50a	0.00	.....	0.00	0.0	0	27	4	0	sw.	U. S. Forest Service.
Hotspring	Owyhee	2,752	5	70.2	.....	100	18	37	30	45c	0.00	.....	0.00	0.0	0	30	1	0	.....	J. M. Waterhouse.
Idaho City	Boise	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Emma L. Hammer.
Idaho Falls	Bingham	4,742	16	64.2	− 2.8	92	4	22	25	54	T.	− 0.76	T.	0.0	0	22	7	2	ne.	Dr. T. M. Bridges.
Indian Valley	Washington	2,999	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Henke.
Irwin	Bingham	6,500	2	61.5	.....	94	4†	20	25	58	T.	.....	T.	0.0	0	18	9	4	ne.	Eva Johnston.
Kellog	Shoshone	2,305	.....	59.9	.....	95	19	28	25	56	0.00	.....	0.00	0.0	0	31	0	0	sw.	W. McM. Huff.
Kirkham	Boise	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	28	3	0	w.	Mrs. Josie B. West.
Kooskia	Idaho	1,261	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lakeview	Bonner	2,250	14	62.8	− 0.7	86	20	34	24	35	0.05	− 0.87	0.05	0.0	1	14	5	12	sw.	E. D. Faust.
Landore	Washington	5,300	.....	58.2	.....	91	19	28	24	50	0.18	.....	0.18	0.0	1	23	8	0	.....	Mrs. Emma L. Brown.
Lewiston	Nez Perce	757	17	70.0	− 3.5	100	19	42	25	47	0.03	− 0.34	0.03	0.0	1	18	11	2	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	14	17	0	w.	Solon McCoy.
Long Gulch	...do	4,500	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	29	2	0	.....	Mrs. Elizabeth A. Hjort.
Loon Creek	Custer	6,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lost River	Blaine	5,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary L. Lemon.
Lowry	Owyhee	.....	2	63.4	.....	98	7	31	8†	63	0.00	.....	0.00	0.0	0	30	1	0	sw.	W. D. Winter.
McCall	Boise	5,025	5	59.2	.....	92	4	23	31	62	0.00	.....	0.00	0.0	0	31	0	0	s.	Will Newman.
Mackay‖	Custer	5,897	3	62.6	.....	91	21	27	25	44	0.00	.....	0.00	0.0	0	25	6	0	nw.	U. S. Forest Service.
Meadows	Washington	3,950	8	61.2	.....	102	19	27	30	62	0.01	.....	0.01	0.0	1	21	10	0	.....	Chas. A. Hackney.
Mesa	...do	3,275	.....	69.4	.....	102	19	36	25	46	T.	.....	T.	0.0	0	23	6	2	w.	Elias Nelson.
Middle Fork	Idaho	1,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph McGhee.
Milner	Cassia	4,200	7	.....	.....	97	18	35	25†	.....	T.	.....	T.	0.0	0	16	15	0	nw.	J. H. Henry.

TABLE 1.—*Climatological data for August, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Idaho—Cont'd.																				
Moscow	Latah	2,748	18	63.1	− 2.3	96	19	34	24	44	T.	− 0.79	T.	0.0	0	20	7	4	nw.	University of Idaho.
Mountainhome	Elmore	3,150	5	65.6	.....	103	19	26	30	59	0.00	.....	0.00	0.0	0	30	1	0	nw.	Mrs. Ellen Manion.
Murtaugh‖	Cassia	.....	4	64.6	.....	92	18	29	30	50	T.	.....	T.	0.0	0	28	3	0	w.	J. E. Steinour.
Nez Perce‖	Nez Perce	3,182	2	60.2	.....	94	18†	27	25	54	0.69	.....	0.48	0.0	2	20	3	8	nw.	P. Mitchell.
Oakley	Cassia	4,700	18	67.9	− 1.6	98	18	30	25	52	0.04	− 0.59	0.04	0.0	1	21	10	0	s.	John Adams.
O'Hara Bar	Idaho	1,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. D. Agnew.
Orofino	Nez Perce	1,027	6	64.8	.....	99	18	33	25	57	0.02	.....	0.01	0.0	2	28	3	0	.....	Geo. Alteneder.
Payette	Canyon	2,159	20	67.6	− 5.0	102	19	32	30	60	0.00	− 0.22	0.00	0.0	0	23	2	6	n.	E. F. Allen.
Peaceful Valley	...do	2,380	.....	70.0[b]	.....	101	10	34	30	51[b]	0.00	.....	0.00	0.0	0	.....	.....	.....	nw.	J. W. Newton.
Pebble	Bannock	5,277	2	60.2	.....	91	19	17	25	58	0.45	.....	0.17	0.0	5	18	12	1	sw.	Mrs. Fannie Say.
Pierson	Custer	6,900	.....	53.0	.....	86	19	15	25	61	0.00	.....	.....	0.0	0	31	0	0	w.	David P. Clarke.
Pine	Elmore	4,100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Jennie Potter.
Placerville	Boise	4,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James McDevitt.
Pleasant Valley	Ada	3,000	3	66.4	.....	99	10	36	25†	52	0.00	.....	0.00	0.0	0	31	0	0	nw.	C. E. Friedrich.
Pocatello	Bannock	4,483	11	68.5	− 2.0	92	20	28	25	52	0.11	− 0.45	0.10	0.0	2	24	7	0	se.	U. S. Weather Bureau.
Pocatello Nursery	...do	5,396	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Anna M. Wrensted.
Poplar	Bingham	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Stanley Bybee.
Portbill	Bonner	1,665	22	59.8	− 4.0	89	11	30	25	42	0.70	− 0.23	0.34	0.0	5	15	12	4	.....	H. A. French.
Powers Ranch	Boise	4,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary French.
Pyle Creek	...do	3,100	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	29	2	0	ne.	Walter L. Cole.
Rattlesnake Creek	Elmore	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Richard M. Green.
Richfield	Lincoln	.....	.....	65.8	.....	96	19	31	30	55[a]	T.	.....	T.	0.0	0	29	2	0	w.	C. H. Fitch.
Rosworth	Twin Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	22	8	1	nw.	D. B. Hartwell.
Ruby Creek	Boise	4,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. A. Hatter.
Rupert	Lincoln	4,204	4	66.0	.....	96	18	30	30	51	0.00	.....	0.00	0.0	0	30	0	1	w.	Will Parry.
St. Maries	Kootenai	2,263	14	61.4	− 3.0	95	19	31	25	54	0.01	− 0.88	0.01	0.0	1	10	10	11	w.	J. S. Turnbull.
Salmon	Lemhi	4,040	5	61.9	.....	98	20	22	25	64	0.05	.....	0.05	0.0	1	27	4	0	w.	E. K. Abbott.
Salmon River Dam	Twin Falls	.....	3	69.1	.....	95	20	37	30	45	T.	.....	T.	0.0	0	26	4	1	n.	Arch M. Gilbert..
Sandpoint	Bonner	2,086	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. H. Edgertond.
Sheep Hill	Boise	5,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Clifford M. Garner.
Shoshone	Lincoln	3,968	3	65.8	.....	92	11	38	30	44	0.00	.....	0.00	0.0	0	26	5	0	w.	O. A. Truman.
Silver City	Owyhee	6,280	3	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	30	1	0	s.	A. D. Bradfield
Smith Prairie	Elmore	5,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. W. Newell.
Smith Ranger Station	Bonner	1,080	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	.....	.....	.....	.....	sw.	T. D. Crittenden.
Soldier Creek	Blaine	.....	.....	64.3	.....	96	20	28	24	55	0.00	.....	0.00	0.0	0	30	1	0	w.	J. E. Minear.
Springfield	Bingham	4,420	2	64.6	.....	95	18†	19	25	54	0.00	.....	0.00	0.0	0	27	4	0	sw.	Mrs. W. A. Edwards.
Sugar‖	Fremont	.....	4	60.2	.....	89	20	18	25	54	0.15	.....	0.13	0.0	2	29	1	1	sw.	Arthur Cutting.
Sunnyside	Elmore	.....	2	68.8	.....	102	19	34	30	50	0.00	.....	0.00	0.0	0	.....	.....	.....	nw.	E. A. Wilmot.
Tripod Mountain	Boise	4,300	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	26	3	2	.....	Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	65.6	.....	96	9	32	30	53	T.	.....	T.	0.0	0	19	12	0	w.	J. A. Waters.
Vernon	Fremont	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Slatery.
Wallace	Shoshone	2,728	3	59.5	.....	89	19	32	25	48	T.	.....	T.	0.0	0	.....	.....	.....	w.	U. S. Weather Bureau.
Wendell	Lincoln	3,400	3	69.6	.....	102	18	37	25†	55	T.	.....	T.	0.0	0	29	2	0	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	19	56.6	− 4.4	76	17	36	27	28	0.47	− 0.59	0.23	0.0	5	28	0	3	w.	Carl S. Weatherwax.
Anacortes	Skagit	60	16	59.6	.....	78	3†	40	12†	36	0.72	− 0.15	0.17	0.0	5	19	8	4	.....	Douglas Allmond.
Baker	...do	200	4	62.4	.....	92	19	31	24	51	1.24	.....	0.41	0.0	4	16	3	12	.....	Robt. M. White.
Bellingham	Whatcom	60	15	59.6	− 1.0	80	19	37	25	35	0.76	− 0.33	0.31	0.0	4	17	9	5	.....	Sanford B. Mayhew.
Blaine	...do	57	13	57.0	− 3.0	79	19	33	25	39	0.78	− 0.05	0.26	0.0	6	14	15	2	w.	U. S. Weather Bureau.
Blalock Island	Benton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blalock Island Garden Co.
Blewett	Chelan	2,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Beermeister.
Bremerton	Kitsap	30	.....	.....	.....	.....	.....	.....	.....	.....	0.09	.....	0.05	0.0	2	.....	.....	.....	.....	U. S. Navy Yard.
Brewster	Okanogan	1,620	.....	68.0	.....	97	19	39	24	35	0.04	.....	0.04	0.0	1	19	11	1	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	.....	.....	55.3	.....	93	19	23	23	50	0.12	.....	0.09	0.0	2	24	0	7	.....	U. S. Reclamation Service.
Cashmere	Chelan	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	28	3	0	nw.	Valley Power Co.
Cedar River	King	535	3	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.74	0.0	4	13	2	16	.....	George Landsburg.
Centralia	Lewis	212	17	59.6	− 4.4	88	17	37	27†	43	0.52	− 0.29	0.46	0.0	3	10	18	3	w.	I. S. Turner.
Cheney	Spokane	2,351	11	62.9	.....	98	20	30	26	64	T.	− 0.77	T.	0.0	0	20	4	7	s.	Northern Pacific Ry.
Clealum	Kittitas	1,930	11	59.6	− 2.6	94	19	23	24	57	0.00	− 0.38	0.00	0.0	0	28	3	0	nw.	J. A. Balmer.
Clearbrook	Whatcom	140	7	57.8	.....	90	19	30	24	54	1.56	.....	0.65	0.0	7	12	8	11	s.	Geo. Gibbs.
Clearwater	Jefferson	135	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colfax	Whitman	2,300	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. James.
Colville	Stevens	1,635	10	60.3	− 5.4	94	9	29	25	52	0.50	− 0.26	0.20	0.0	3	19	8	4	sw.	W. L. Sax.
Conconully	Okanogan	2,300	10	61.7	− 2.9	93	19	29	24	42	1.02	+ 0.38	0.25	0.0	9	15	9	7	s.	Wm. Baines.
Cowiche	Yakima	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Crescent	Lincoln	2,250	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Otto Wollweber.
Davenport	...do	2,450	1	62.4	.....	94	19	34	24†	47	T.	.....	T.	0.0	0	29	2	0	sw.	W. H. Reed.
Dayton	Columbia	1,700	24	69.0	+ 0.6	96	19	43	24	32	0.00	− 0.49	0.00	0.0	0	23	6	2	sw.	W. W. Hendron.
Detroit	Mason	30	2	61.9	.....	90	18†	41	24	42	0.53	.....	0.38	0.0	2	14	15	2	sw.	Walter O. Eckert.
Dixie	Walla Walla	5,000	1	.....	.....	.....	.....	.....	.....	.....	0.13	.....	0.08	0.0	2	22	3	6	sw.	T. Z. Andrews.
Duckabush	Jefferson	350	2	59.8	.....	86	18†	38	24	41	0.20	.....	0.07	0.0	3	13[a]	6[a]	11[a]	sw.	E. J. Finch.
East Sound	San Juan	500	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Benj. E. Harrison.
Ellensburg	Kittitas	1,571	22	63.0	− 2.7	98	19	29	24†	56	0.00	− 0.28	0.00	0.0	0	22	0	9	nw.	R. Lee Barnes.
Ephrata	Grant	1,265	7	73.6	.....	99	20	30	23	55	.....	.....	.....	0.0	.....	28	3	0	s.	T. J. Cook.
Forks	Clallam	480	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. A. Markham.
Fort Simcoe	Yakima	1,427	16	67.6	− 5.1	100	20	32	24	51[c]	0.00	− 0.21	0.00	0.0	0	23[c]	2[c]	3[c]	sw.	Frank C. Hill.
Goat Lake	Snohomish	2,900	1	.....	.....	.....	.....	.....	.....	.....	1.36	.....	0.54	0.0	6	.....	.....	.....	.....	C. M. Mackintosh.
Gold Creek	Yakima	2,600	1	.....	.....	.....	.....	.....	.....	.....	0.03	.....	0.03	0.0	1	27	2	2	w.	John W. Anderson.
Gold Hill	...do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goldendale	Klickitat	1,600	4	64.8	.....	97	19	37	16	46	T.	.....	T.	0.0	0	29	2	0	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	7	.....	.....	.....	.....	.....	.....	.....	1.92	.....	1.00	0.0	6	7	8	16	nw.	C. H. Cleaver.
Guler	Klickitat	2,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Kuehnel.
Hatton	Adams	1,100	5	65.2	.....	104	19	33	28	53	0.43	.....	0.43	0.0	1	13	12	6	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	28	2	1	.....	Dr. B. Hill.
Irene Mountain	Okanogan	3,015	1	.....	.....	.....	.....	.....	.....	.....	1.04	.....	0.80	0.0	3	14	13	4	sw.	Mrs. Manda Shain.
Kachess Valley	Kittitas	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kennewick	Benton	367	15	69.4	− 5.8	101	9	38	29	49	0.02	− 0.19	0.02	0.0	1	.....	.....	.....	.....	Mrs. I. W. Soth.
Kettle Falls	Stevens	1,265	1	63.3	.....	94	9	33	24†	47	0.34	.....	0.22	0.0	4	19	10	2	.....	Harry H. Cole.
Kiona	Benton	430	5	67.9	.....	99	19	39	30	49	0.00	.....	0.00	0.0	0	21	9	1	sw.	Dr. F. S. Hedger.
Kosmos	Lewis	775	4	60.0	.....	90	17†	29	24	50	0.51	.....	0.21	0.0	4	2	28	1	ne.	J. A. Ulsh.
La Center	Clarke	250	13	61.0	− 3.5	87	18	33	24	43	0.45	− 0.69	0.25	0.0	2	15	14	2	nw.	Joseph Brothers.
La Crosse	Whitman	1,400	1	64.3	.....	100	19	28	24	56	T.	.....	T.	0.0	0	26	5	0	sw.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	1	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	14	11	6	nw.	U. S. Reclamation Service.
Lake Kachess	...do	2,235	2	59.2	.....	94	19	28	24	49	0.04	.....	0.04	0.0	1	21	7	3	n.	Do.
Lake Keechelus	...do	2,479	2	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.30	0.0	2	12	6	13	.....	Do.
Lakeside	Chelan	1,116	19	68.6	− 3.9	95	9†	42	25	37	0.41	+ 0.04	0.41	0.0	1	15	12	4	w.	W. H. Van Meter.
Laurel	Klickitat	1,900	1	.....	.....	.....	.....	.....	.....	.....	0.04	.....	0.04	0.0	1	17	13	1	w.	Mrs. Minnie E. Strout.

TABLE 1.—*Climatological data for August, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Cont'd.																				
Laurier	Ferry			64.4		98	8†	34	25†	32	1.05		0.74	0.0	6	4	3	24	w.	Mrs. J. S. Myers.
Lester	King	1,614	6	58.9		98	19	34	24†	51	0.75		0.40	T.	2	18	0	13	w.	W. W. Clabaugh.
Lone Tree	Chehalis	14	1	56.6		66	4†	47	17	16	0.23		0.13	0.0	6	3	16	12	nw.	U. S. A. Engineer Corps.
Longmires Springs	Pierce	2,800	1																	U. S. Forest Service.
Lost Creek	Okanogan	3,125	1								0.36		0.26	0.0	2	18	9	4	sw.	P. H. Leese.
Lucerne	Chelan	1,100	3																	Mrs. Barbara Shearer.
Lyle	Klickitat	600	17																	Wm. Morginson.
McCumber's Ranch	Yakima	2,182	1								0.05		0.05	0.0	1	25	4	2	sw.	Mrs. Mary McCumber.
Merritt	Chelan	2,175	3																	H. B. Smith.
Mottinger	Benton	307	10	71.8	− 3.0	100	19	45	25	44	0.00	− 0.22	0.00	0.0	0	26	1	4	w.	G. H. Mottinger.
Mount Pleasant	Skamania	650	10	62.4	− 2.6	88	17	44	16†	38	0.23	− 0.82	0.16	0.0	2	23	4	4	w.	F. M. Grout.
Moxee	Yakima	1,000	18	65.8	− 4.0	102	19	33	24†	57	0.10	− 0.10	0.10	0.0	1	21	9	1	w.	Henry B. Scudder.
Newport	Stevens	2,400	....	59.0		94	19	25	25	57	0.05		0.05	0.0	1	24	7	0	sw.	Chas. M. Talmadge.
Nighthawk	Okanogan	3,050																		Steve Nagy.
North Head	Pacific	211	8	54.8	− 3.1	74	24	47	17	22	0.45	− 0.11	0.19	0.0	8	2	6	23	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	11	62.0		90	21	33	24	45	1.36	+ 0.14	1.00	0.0	4	11	13	7	.....	Forrest B. Phillips.
North Yakima	Yakima	1,070	1	68.0		95	9†	37	24	37	0.12		0.11	0.0	2	25	2	4	n.	U. S. Weather Bureau.
Nutland	Klickitat		1	69.0		99	19	33	26	55	0.04		0.04	0.0	1					J. R. Shepard.
Odessa	Lincoln	1,540	7																	Wm. U. Neeley.
Olga	San Juan	50	20	57.2	− 2.0	75	18	44	23	27	0.50	− 0.39	0.28	0.0	4	18	9	4	nw.	Cecil S. Willis.
Olympia	Thurston	200	32	59.8	− 2.9	89	19	35	24	45	0.05	− 0.61	0.03	0.0	2	17	4	10	ne.	M. O'Connor.
Omak	Okanogan	850	1																	Wm. G. Tait.
Oroville	....do	922	1																	A. M. Dufield.
Peola	Garfield	5,000	1								0.03		0.03	0.0	1	26	5	0	nw.	Samuel Gruell, sr.
Pomeroy	....do	1,500	18	66.8	− 4.7	101	19	35	24	51	T.	− 0.52	T.	0.0	0	24	6	1	w.	Peter McClung.
Port Crescent	Clallam	259	15	52.8	− 3.4	75	18	35	24	34	T.	− 0.70	T.	0.0	4	9	18	4	nw.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	20	57.6	− 3.3	77	18	45	12†	26	0.53	− 0.27	0.28	0.0	4	14	4	13	nw.	Frank Plummer.
Pullman	Whitman	2,550	18	64.2°	− 2.6	97	19	33	29	44°	T.	− 0.73	T.	0.0	0	21[b]	2[b]	6[b]	w.	State Agricultural College.
Quinault	Chehalis	300	3	59.8		86	18	38	24	40	0.65		0.18	0.0	6	19	3	9	w.	A. V. Higley.
Republic	Ferry	2,628	10	58.7	− 4.5	94	19	29	25	53	1.13		0.85	0.0	4	17	3	11	nw.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	3																	James W. Nicol.
Ritzville	Adams	1,825	11								0.10	− 0.19	0.10	0.0	1					Northern Pacific Ry.
Rock Lake	Whitman	1,910	4	64.8		98	19	37	47	45	T.		T.	0.0	0	21	9	1	w.	P. M. Ramsey.
Rosalia	....do	2,425	18	63.8	− 1.3	93	19	35	24	40	0.00	− 0.72	0.00	0.0	0	25	6	0	sw.	Hans Mumm.
Russells Ranch	Yakima	2,870	1								T.		T.	0.0	0	19[a]	10[a]	1[a]	sw.	Maggie M. Russell.
Scenic Hot Springs	King	2,021																		
Seattle	....do	123	19	60.2	− 2.9	82	19	47	24	26	0.17	− 0.32	0.09	0.0	4	6	14	11	n.	U. S. Weather Bureau.
Sedro-Wooley	Skagit	38	13	60.6	− 0.9	92	16	34	24	46	1.85	+ 0.28	0.95	0.0	6	14	11	6	.....	Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	3	69.8		98	19	38	24	42	0.00		0.00	0.0	0	28	1	2	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom																			Skagit Power Co.
Snohomish	Snohomish	100	16	59.4	− 2.9	91	19	32	24	44	0.45	− 0.64	0.32	0.0	4	18[b]	5[b]	6[b]	nw.	Warren Hodge.
Snoqualmie Falls	King	667	11	60.8		92	19	36	24	44	0.36	− 1.16	0.12	0.0	5	19	0	12	.....	O. N. Wiswell.
Snoqualmie Pass	Kittitas	3,000																		C. E. Ingraham.
Snyders Ranch	Okanogan	2,200	1								0.93		0.48	0.0	4	21	8	2	w.	Geo. M. Snyder.
South Bend	Pacific	16	15	58.7	− 2.8	84	17	39	24	37	0.33	− 1.14	0.19	0.0	8	4	22	5	w.	Miss Winifred Eichner.
Spokane	Spokane	1,943	29	65.2	− 2.7	95	19	37	25	42	0.15	− 0.35	0.15	0.0	2	16	9	6	sw.	U. S. Weather Bureau.
State University	King		1	59.1		81	18†	43	24	26	0.37		0.36	0.0	2	16	3	12	w.	University of Washington.
Stokes Ranch	Okanogan	2,670	1								0.95		0.46	0.0	5	16	11	4	nw.	Chas. W. Gunn.
Sullivan Lake	Stevens	2,700																		U. S. Forest Service.
Sumner	Pierce	77	2	58.0		88	19	29	24	46	0.22		0.14	0.0	3	14	5	12	n.	H. E. Thompson.
Sunnyside	Yakima	740	15	65.2	− 4.8	96	19	36	25	58	0.02	− 0.20	0.02	0.0	1	22	9	0	nw.	U. S. Reclamation Service.
Tacoma	Pierce	213	24	60.4	− 2.6	86	19	45	24	33	0.12	− 0.58	0.11	0.0	2	12	11	8	n.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	25	52.9	− 2.4	62	24	47	17	14	0.42	− 1.69	0.13	0.0	10	5	7	19	s.	Do.
Tieton	Yakima	2,000	1	61.2		93	19	31	24	46	T.		T.	0.0	0	28	3	0	w.	U. S. Reclamation Service.
Touchet	Walla Walla	556	3	67.0		97	9†	31	25	53	T.		T.	0.0	0	25	4	2	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	1								0.15		0.15	0.0	1	26	4	1	sw.	R. H. King.
Trinidad	Grant	900	6	72.6		100	19	44	24†	37	T.		T.	0.0	0	29	2	0	nw.	J. C. Wheeler.
Twin Sister Lakes	Yakima	4,500																		
Twisp	Okanogan	1,350	7																	
Tyee	Chelan	2,000	1								0.05		0.03	0.0	2	19	8	4	w.	Elias McCrea.
Upper Clealum Valley	Kittitas	5,300																		
Vancouver	Clarke	100	35	64.2	− 2.0	91	17†	43	12†	42	0.29	− 0.32	0.16	0.0	2	11	18	2	nw.	A. A. Quarnberg.
Vashon Island	King	40	21	58.0	− 5.0	78	18†	43	24†	30	0.52	− 0.06	0.33	0.0	3	13	4	14	n.	Miss Gertrude McClintock.
Wahluke	Grant	410	6	70.8		100	19	36	29	44[b]	0.17		0.17	0.0	1	26	2	3	.....	F. C. Koppen.
Wallace	Okanagon	4,000	1								0.60		0.31	0.0	4	15	12	4	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	26	70.6	− 3.2	98	9	41	24	36	0.11	− 0.34	0.11	0.0	1	24	5	2	s.	U. S. Weather Bureau.
Waterville	Douglas	2,624	20																	O. R. Hopewell.
Wenatchee (near)	Chelan	1,169	11	66.1	− 1.6	91	19	39	24	29	0.41	+ 0.07	0.40	0.0	2	24	3	4	w.	Geo. A. Pitcher.
West Branch	Stevens	2,600																		U. S. Forest Service.
Wilbur	Lincoln	2,203	11	60.9	− 3.0	92	19	30	25	51	T.	− 0.50	T.	0.0	0	25	3	3	sw.	Rollin J. Reeves.
Yale	Cowlitz	375	3	61.5		90	17	40	22	44	0.30		0.25	0.0	2	11	20	0	sw.	L. F. Williams.
Zindel	Asotin	715	8																	M. W. Zindel.
Oregon.																				
Albany	Linn	214	28	63.0	− 3.0	92	17	40	13†	42	0.08	− 0.44	0.08	0.0	1	19	7	5	n.	F. M. French.
Ashland	Jackson	1,963	22	68.4	− 0.6	95	19	40	29	39	0.00	− 0.37	0.00	0.0	0	14	16	1	w.	G. G. Eubanks.
Astoria	Clatsop	78	48	58.7	− 2.9	76	17	48	30	24	0.58	− 0.52	0.27	0.0	6	11	12	8	nw.	Irving Club.
Baker City	Baker	3,466	20																	U. S. Weather Bureau.
Bay City	Tillamook	14	15	56.2	− 2.9	79	25	39	24	37	0.33	− 1.14	0.09	0.0	6	18	6	7	nw.	J. O. Bozarth.
Bend	Crook	3,629	8																	F. O. Minor.
Birch Creek	Wheeler	2,900	1	66.2		94	18†	39	24	46°	0.01		0.01	0.0	1	24°	4°	0°	w.	F. S. Matteson.
Black Butte	Lane	1,200	9	58.9		84	16	34	23	47	0.05		0.05	0.0	1	29	2	0	nw.	William Harris.
Bialock	Gilliam	237	11	73.2	− 2.6	102	19	47	24	40	T.	− 0.12	T.	0.0	0	28	2	1	w.	Geo. W. Long.
Burns	Harney	4,157	20	63.0	− 1.8	95	20	33	29	56	0.00	− 0.14	0.00	0.0	0	31	0	0	w.	J. C. Welcome, jr.
Cascade Locks	Hood River	100	19	64.2	− 3.6	89	17	44	16†	39	0.06	− 0.79	0.06	0.0	1	26	2	3	w.	Val. W. Tompkins.
Cazadero	Clackamas	503	1	62.8		94	17	39	16	51	0.26		0.13	0.0	3	24	4	3	nw.	Alf Drill.
Christmas Lake	Lake	4,320	2	56.1		91	19†	18	29	66	0.00		0.00	0.0	0	19	10	2	nw.	John C. Meen.
Condon	Gilliam	2,888	2																	C. H. Williams.
Corvallis	Benton	266	21	62.7	− 2.1	91	17	40	27	40	0.01	− 0.41	0.01	0.0	1	27	3	1	w.	Oregon Agricultural Coll.
Dayville	Grant	1,500	15	63.8	− 3.6	95	18	29	25	60	0.01	− 0.34	0.01	0.0	1	28	0	3	nw.	Dr. J. Campbell-Martin.
Deadwood	Lane	350	....	62.2		85	8†	39	24	40	0.02		0.02	0.0	1	20	11	0	nw.	Jos. Slemmons.
Doraville	Columbin	600	8	58.4		84	17	44	22†	35	0.59		0.41	0.0	4	16	6	9	nw.	Jos. Hackenberg.
Drain	Douglas	300	7	62.2		92	17	38	21	49[b]	0.00		0.00	0.0	0	17[b]	12[b]	0[b]	nw.	Ira Wimberly.
Echo	Umatilla	625	5	69.4		99	9†	36	25	45	0.00		0.00	0.0	0	26	4	1	w.	R. B. Stanfield.
Ella	Morrow	830	5	70.4		99	9†	36	27	47	0.00	− 0.28	0.00	0.0	0	31	0	0	sw.	C. F. Troedson.
Eugene	Lane	453	20	61.6	− 3.3	88	18†	41	23†	47	T.	− 0.62	T.	0.0	0	25	5	1	n.	F. L. Barker.
Fairview	Coos	142	12	59.8	− 1.6	92	24	30	24	62	0.25	− 0.33	0.25	0.0	1	27	0	4	nw.	William Bettys.

TABLE 1.—*Climatological data for August, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon—Cont'd.																				
Falls City	Polk	355	12	60.8	− 2.0	91	8†	36	12	46	0.06	− 0.50	0.06	0.0	1	28	3	0	e.	Chas. F. Vick.
Forest Grove	Washington	220	20																	Pacific University.
Gardiner	Douglas	72	20	59.4	− 1.7	86	24	44	22†	42	0.14	− 0.71	0.14	0.0	1	20[a]	9[a]	1[a]		Hon. J. S. Gray.
Glendale	do	1,441	5	60.5		91	8	38	14†	49	0.00		0.00	0.0	0	30	1	0	nw.	B. J. Simpson.
Glenora	Tillamook	575	18	60.0	− 3.1	91	17	35	24	51	0.21	− 1.01	0.11	0.0	2	26	2	3	nw.	Mrs. Jennie Reeher.
Gold Beach	Curry	40	8	55.3		76	24	36	21	29	0.00		0.00	0.0	0	27	0	4	nw.	C. Dewey.
Granite	Grant	4,680	4	55.8		97	19	23	25	63	T.		T.	0.0	0	12	15	4	nw.	L. M. Ford.
Grants Pass	Josephine	956	21	65.1	− 3.5	98	19	33	29	57	0.00	− 0.30	0.0	0.0	0	29	2	0	s.	John B. Paddock.
Grass Valley	Sherman	2,381	8	60.8		98	19	29	12	52	0.00		0.00	0.0	0	21	10	0	nw.	Oreg. Ry. & Navigation Co.
Grindstone	Crook	5,000		57.8		91	19	25	15	50	0.00		0.00	0.0	0	18	9	4	sw.	Orrin C. Mills.
Headworks	Clackamas	719	4	65.6		92	17	49	22†	23	0.09	− 1.76	0.09	0.0	1	13	7	11	s.	Portland Water Works.
Heppner	Morrow	1,950	21	63.5	− 4.6	94	19	35	24†	43	0.00	− 0.27	0.00	0.0	0	26	4	1	nw.	Ralph Kenton.
Hermiston	Umatilla	450	3	69.6		99	9	35	25	49	T.		T.	0.0	0	28	3	0		C. W. Kellogg.
Hood River	Hood River	300	19	65.4	− 1.1	98	19	37	24	52	T.	− 0.25	T.	0.0	0	20	11	0	w.	H. L. Hasbrouck.
Huntington	Baker	2,165	9			96	1				0.00	− 0.23	0.00	0.0	0	8	20	3		J. M. Day.
Jacksonville	Jackson	1,640	21	68.6	− 1.1	97	18†	38	29	47	0.00	− 0.44	0.00	0.0	0	27	3	1	n.	E. Britt.
Joseph	Wallowa	4,400	21	56.0	− 6.4	89	19	28	25	45	0.25	− 0.49	0.20	0.0	2	22	8	1	s.	F. F. McCully.
Klamath Agency	Klamath	4,169	2	54.8		87	1†	22	30	56	0.00		0.00	0.0	0	29	2	0	nw.	Edson C. Watson.
Klamath Falls	do	4,250	15	63.3	− 3.6	91	25	31	29	49	0.00	− 0.29	0.00	0.0	0	30	1	0	nw.	W. H. Heileman.
La Grande	Union	2,784	24	65.2	− 2.9	99	19	30	25	51	0.29	− 0.24	0.18	0.0	2	24	5	2	nw.	W. A. Worstell.
Lakeview	Lake	4,800	7	69.2	+ 2.9	100	27†	41	23	48	0.04	− 0.25	0.02	0.0	3	21	4	6	s.	Geo. L. Horton, jr.
Madras	Crook	2,150	1					26	25		T.		T.	0.0	0	29	2	0	nw.	Howard W. Turner.
Marshfield	Coos	12	6	56.8		87	24	40	24	47									nw.	U. S. Weather Bureau.
McKenzie Bridge	Lane	1,400	7	59.6		97	19	30	16†	56	0.08		0.05	0.0	2	25	0	6	w.	Geo. Frissell.
McMinnville	Yamhill	4,070	4	62.3	− 3.2	92	17	40	14	42	T.	− 0.56	T.	0.0	0	22	6	3	ne.	J. H. Pruett.
Merrill	Klamath	180	22	61.8		92	10	28	29	52	0.00		0.00	0.0	0	31	0	0		Mrs. Agnus Ritchson.
Mikkalo	Gilliam	1,600	4	66.3		97	19	37	24	42	0.03		0.03	0.0	1	27	3	1	w.	Frank Little.
Miramonte Farm	Clackamas	195	21	63.0	− 2.0	91	17	42	12	39	0.01	− 0.50	0.01	0.0	1	26	5	0	n.	G. M. Muecke.
Monroe	Benton	350	13	62.6	− 2.6	89	17	42	4†	39	0.01	− 0.59	0.01	0.0	1	30	1	0	n.	L. A. Peek.
Mount Angel	Marion	485	24	63.6	− 3.9	89	17	45	16	35	0.21	− 0.30	0.21	0.0	1	28	3	0	n.	Dr. U. F. Fisher.
Mountain Park	do	1,440	4	62.8		93	19	38	16	42	0.04		0.04	0.0	1	23	4	4	w.	M. Markley.
Musick	Douglas	5,000		57.1		85	9	32	29	39	0.00		0.00	0.0	0	29	1	1	sw.	Alex. Lundburg.
Newport	Linton	69	22	56.2	− 1.3	84	24	40	23	42	0.11	− 0.69	0.10	0.0	2	17	5	9	nw.	William Matthews.
Paisley	Lake	4,500	6	65.4		90	31	36	29	44	0.00		0.00	0.0	0	31	0	0	nw.	E. C. Woodward.
Pendleton	Umatilla	1,070	20	65.7	− 4.7	97	9†	34	23†	54	T.	− 0.41	T.	0.0	0	26	5	0	sw.	E. F. Averill.
Pilot Rock	do	1,817	1	68.6		98	10†	39	25	50	0.02		0.02	0.0	1	27	3	1	nw.	John P. McManus.
Pompeii	Clackamas	3,879	15	53.5	− 2.8	83	18	33	24	33	0.58	− 1.52	0.46	0.0	2	26	1	4	sw.	O. C. Yocum.
Portland	Multnomah	57	38	63.9	− 2.3	91	18	48	16	34	0.13	− 0.45	0.08	0.0	2	11	16	4	nw.	U. S. Weather Bureau.
"P" Ranch	Harney	4,300																		J. P. Jefferson.
Prineville	Crook	2,864	13	59.8[‡]	− 3.5	95	18†	28	28	56[‡]	T.	− 0.30	T.	0.0	0	17	2	6		Geo. Whiteis.
Prospect	Jackson	2,750	4																	E. F. Graham.
Ramsey	Wasco	1,350		59.8		92	19	34	24	44	0.00		0.00	0.0	0	30	0	1	e.	Mrs. Iva B. Collins.
Range	Grant	3,500	1	57.8		96	19†	26	16	57	0.00		0.00	0.0	0	31	0	0		Craig Thom.
Richland	Baker	2,350	8	65.5		100	19	32	25	55	0.05		0.05	0.0	1	25	6	0		C. G. Morgan.
Riverside	Malheur	3,000	11	64.2	− 5.5	101	1†	25	29	64	0.00	− 0.22	0.00	0.0	0	26	5	0	w.	Mrs. Leah Fairman.
Roseburg	Douglas	523	33	64.0	− 2.5	91	18	40	24	44	0.00	− 0.32	0.00	0.0	0	29	2	0	nw.	U. S. Weather Bureau.
Salem	Marion	120	20	63.5	− 2.7	88	17	46	27	38	0.02	− 0.41	0.02	0.0	1	26	2	3	nw.	M. P. Baldwin.
Siskiyou	Jackson	4,115	1	61.2		91	25	30	15†	50	0.00		0.00	0.0	0	27	3	1	ne.	U. S Weather Bureau.
Sparta	Baker	4,150	17																	Hon. J. A. Wright.
Stafford	Clackamas	400	13	63.8	− 2.6	92	17	43	1†	38	T.	− 0.86	T.	0.0	0				ne.	John P. Gage.
The Dalles	Wasco	112	35	67.6	− 3.2	97	19	41	25	43	0.00	− 0.18	0.00	0.0	0	29	1	1	w.	S. L. Brooks.
Toledo	Linton	75	20	62.7	+ 1.8	82	24	48	1	30	0.08	− 0.46	0.08	0.0	1	29	0	2	n.	C. B. Crosno.
Umatilla	Umatilla	340	14	71.0	− 2.7	100	19	43	30	50	T.	− 0.30	T.	0.0	0	26	0	5	w.	Mrs. Helen T. Duncan.
Vale	Malheur	2,242	18	64.7	− 4.3	110	11	31	25	70	T.	− 0.26	T.	0.0	0	28	3	0	n.	H. P. Osborn.
Van	Harney	3,506	4																	Geo. Howe.
Wallace Orchard	Polk	170	1	69.4		91	17	53	27	24	0.16		0.16	0.0	1	7	24	0		Chas. A. Parks.
Wallowa	Wallowa	2,935	7	60.6[d]		97	19	27	27	60[a]	0.06		0.06	0.0	1	19	7	5	nw.	L. J. Coverstone.
Wasco	Wasco	1,263	2	66.7		94	8	42	16	37	0.00		0.00	0.0	0	19	10	2	w.	A. J. Swift
Warmspring	Crook	1,200	8	64.0		98	19	36	25	50	0.00		0.00	0.0	0	29	1	1	nw.	C. C. Covey.
Weston	Umatilla	1,800	20	65.4	− 2.9	96	9†	33	24	49	0.18	− 0.51	0.15	0.0	2	15	7	9	sw.	M. A. Baker.
Williams	Josephine	1,368	17																	J. M. John.
Yonna	Klamath		3	59.7		89	31†	22	29	58	0.00		0.00	0.0	0	31	0	0	w.	Jacob Rueck.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1910. District No. 12, Columbia Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana.																																	
Anaconda	Missoula							.06			.06	.01	.02	T.											.13					.27		T.	0.55
Bison Mountain	do						.16							.21							.14				.17				.35				1.03
Butte	do							.17				T.	T.											T.						.50		.10	0.77
Columbia Falls	Flathead																																
Como	Bitter Root							.16																.18	.17				.34				0.85
Dayton‖	Flathead															.10									.09				.12			.75	1.06
East Anaconda‖	Missoula							.03			.07	.01	.02	T.											.07					.04		T.	0.44
Fortine	Flathead				T.	.28		.10		T.						T.								.20	.01					T.		.09	0.68
Hamilton	Bitter Root							.26																	.24				.30				0.80
Hat Creek	Missoula							.13					.01												.20					.50			0.84
Kalispell	Flathead					.10										T.								.20								.37	0.67
Lost Creek	Missoula							T.			T.	T.													T.					.60			0.60
McGinnis Meadows	Kootenai							.01								.02								T.	.14								0.17
Missoula	Missoula								T.								T.								.35					.22			0.57
Ophir	do							1.00																T.						1.25		.08	2.33
Ovando	do							.82									T.								.25	T.				1.00		T.	2.07
Philipsburg	do							.27																	T.					.30		T.	0.57
Plains	Columbia																								.34							.70	1.04
Pleasant Valley	Kootenai						.02									T.									.10								0.12
Polson	Flathead																												.22				0.22
St. Ignatius	do					T.										.01									.50				.13			T.	0.64
St. Regis	Missoula																																0.00
Saltese	do																																
Snowshoe	Kootenai						T.																		.16				T.			.07	0.23
Troy	do						.50																										0.50
Upper Lake McDonald	Flathead					T.	T.									T.								T.	.10					T.			0.10
Willow Glen Stock F'm	Missoula							.08			T.			T.										.06						.02		T.	0.16
Wyoming.																																	
Afton	Snake		.12									.48																					0.60
Alta	do											.03	.09																				0.12
Bedford	do	.08	T.									.27			T.						.09												0.44
Snake River	do										T.	.10	T.	T.																T.			0.10
Nevada.																																	
San Jacinto	Snake	T.																			T.												T.
Utah.																																	
Standrod	Raft	.22									.13	T.	.06	.21	.02																		0.64
Idaho.																																	
Albion	Upper Snake										.01	.32									T.												0.33
Almo	do																																
American Falls	do																																
Blackfoot‖	do										T.	T.								T.							T.						T.	
Blackfoot Dam	do	T.									T.	.22									.02												0.24
Bock's Ranch	Boise																																
Bogus Creek	Payette																																0.00
Boise	Boise																																0.00
Bonners Ferry	Upper Columbia				T.	.08	.06	.31																	T.					.01		.03	0.49
Boulder Mine	Boise																													T.			T.
Buhl	Upper Snake																																0.00
Burke	Upper Columbia						T.																	.03								.02	0.05
Caldwell	Boise																																0.00
Camas	Lost River Region																																0.00
Cambridge	Middle Snake										T.																						T.
Cedar Creek Dam	Upper Snake																																0.00
Chesterfield	do	T.	.40								T.	.08									.24												0.72
Cœur d'Alene	Upper Columbia																																0.00
Cottonwood Creek	Boise																													.01			0.01
Crawford	Payette																												T.	T.			T.
Culdesac	Clearwater																										T.						T.
Deary	do																																
Dent	do							.02																									0.02
Driggs	Upper Snake	.05									T.																						0.05
Edie	Lost River Region																																0.00
Edwardsburg	Salmon																																
Emmett	Payette																																0.00
Flowers	Wood-Malad																																
Forney	Salmon																													.15			0.15
Garden Valley	Payette																												T.				T.
Garnet	Middle Snake																																0.00
Glenns Ferry	do																																0.00
Gooding	Wood-Malad																																0.00
Grand Forks	Upper Columbia																																
Grandview	Middle Snake																																0.00
Grimes Pass	Boise																												T.				T.
Guffey	Middle Snake																																0.00
Hailey	Wood-Malad																																0.00
Hotspring	Middle Snake																																0.00
Idaho City	Boise																																
Idaho Falls	Upper Snake																				T.												T.
Indian Valley‖	Middle Snake																																
Irwin	Upper Snake											T.	T.		T.															T.			T.
Kellog‖	Upper Columbia																																0.00
Kirkham	Payette																																0.00
Kooskia	Clearwater																																
Lakeview	Upper Columbia																														.05		0.05
Landore	Middle Snake																													.18		T.	0.18
Lewiston	Clearwater																															.03	0.03
Little Camas	Boise	T.																															T.
Long Gulch	do																												T.				T.
Loon Creek	Salmon																																
Lost River	Lost River Region																																
Lowry	Owyhee																																0.00
McCall	Payette																																0.00
Mackay‖	Lost River Region																																0.00
Meadows	Salmon																													.01			0.01
Mesa	Middle Snake							T.				T.																					T.
Middle Fork	Clearwater																																
Milner	Upper Snake																			T.													T.
Moscow	Upper Columbia																													T.		T.	T.
Mountainhome	Middle Snake																																0.00
Murtaugh‖	Upper Snake																				T.												T.
Nez Perce	Clearwater							.21																						.48			0.69
Oakley	Upper Snake										T.									.04													0.04
O'Hara Bar	Clearwater																																
Orofino	do							.01																						.01			0.02

TABLE 2.—*Daily precipitation for August, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Idaho—Cont'd.																																	
Payette	Payette																																0.00
Peaceful Valley	Middle Snake																																0.00
Pebble	Upper Snake	.09									T.	.08	.09		.17						.02											0.45
Pierson	Salmon																																0.00
Pine	Boise																																
Placerville	...do																																
Pleasant Valley	...do																																
Pocatello	Upper Snake										.10	.01								T.												0.00
Pocatello Nursery	...do																																0.11
Poplar	...do																																
Porthill	Upper Columbia				.09	.10										.05																0.70
Powers Ranch	Boise																													.12		.34	
Pyle Creek	Payette																																T.
Rattlesnake Creek	Boise																													T.			
Richfield	Wood-Malad																				T.											T.
Roseworth	Upper Snake																																0.00
Ruby Creek	Boise																																
Rupert	Upper Snake																																0.00
St. Maries	Upper Columbia							T.																									0.01
Salmon	Salmon	T.						T.	T.	T.				T.															.01		T.		0.05
Salmon River Dam	Upper Snake										T.									T.	T.						T.		.05				T.
Sandpoint	Upper Columbia																																
Sheep Hill	Boise																																
Shoshone	Wood-Malad																																0.00
Silver City	Owyhee																																0.00
Smith Prairie	Boise																																
Smith Ranger Station	Upper Columbia																																0.00
Soldier Creek	Wood-Malad																																
Springfield	Upper Snake																																0.00
Sugar	...do										.13																		.02				0.15
Sunnyside	Middle Snake																																0.00
Tripod Mountain	Payette																																0.00
Twin Falls	Upper Snake																			T.													T.
Vernon	...do																																
Wallace	Upper Columbia						T.	T.	T.							T.								T.	T.						T.		T.
Wendell	Wood-Malad																			T.													T.
Washington.																																	
Aberdeen	Coast												.06			.07							.08					23		.03			0.47
Anacortes	Puget Sound													.16	.10															.16	.17	.13	0.72
Baker	...do													T.	.33								T.	.28					.22			.41	1.24
Bellingham	...do													.31	T.	.10							.05	T.					.30				0.76
Blaine	...do													.20	.02								.06	.05					.19			.26	0.78
Blalock	Columbia																																
Blewett	Wenatchee																																
Bremerton	Puget Sound															.95													.04				0.09
Brewster	Columbia			T.													.04														T.		0.04
Bumping Lake	Yakima														T.														.09		.03		0.12
Cashmere	Wenatchee			T.		T.																		T.						T.	T.	T.	
Cedar River	Puget Sound													.20	.06														.45			.74	1.45
Centralia	Coast													.03									T.						.46			.03	0.52
Cheney	Spokane																													T.		T.	T.
Clealum	Yakima																																0.00
Clearbrook	Puget Sound						.01							.42	.02								.04						.41		.01	.65	1.56
Clearwater	Coast																																
Colfax	Palouse																																
Colville	Columbia															.18														.12		.20	0.50
Conconully	Okanogan				.09	T.	.21	.19	.02	.01				T.	.05									T.					.18		.02	.25	1.02
Cowiche	Yakima																																
Crescent	Spokane																																
Davenport	Columbia																												T.			T.	T.
Dayton	...do																																0.00
Detroit	Puget Sound															T.													.15		T.	.38	0.53
Dixie	Columbia			T.																									.08	.05			0.13
Duckabush	Puget Sound														.06														.07			.07	0.20
East Sound	...do																																
Ellensburg	Yakima																																0.00
Ephrata	Columbia																																
Forks	Coast																																
Fort Simcoe	Yakima																																0.00
Goat Lake	Puget Sound														.54	.35						.06	.29						.07		.05	1.36
Gold Creek	Yakima															.03																	0.03
Gold Hill	...do																																
Goldendale	Columbia															T.																	T.
Granite Falls	Puget Sound														.54							.01	.15						.21	.01		1.00	1.92
Guler	Columbia																																
Hatton	...do																																
Huntsville	...do																												T.		T.	.43	0.43
Irene Mountain	...do								T.							.80													.04		T.	.20	0.00
Kachess Valley	Yakima																																1.04
Kennewick	Columbia																												.02				0.02
Kettle Falls	...do															.22													.05	.03		.04	0.34
Kiona	Yakima																																0.00
Kosmos	Columbia													.13	.07														.10			.21	0.51
La Center	...do												T.			.25													.20				0.45
La Crosse	Palouse																															T.	T.
Lake Clealum	Yakima															T.																	T.
Lake Kachess	...do														.04	T.													T.				0.04
Lake Keechelus	...do														.30	.20	T.												T.				0.50
Lakeside	Columbia			T.																			T.									.41	0.41
Laurel	...do															.04																	0.04
Laurier	Kettle			.01			T.		T.					T.	.74														.19	.01	.61	.09	1.05
Lester	Puget Sound											T.		.35															T.			.40	0.75
Lone Tree	Coast							T.					.01	.13	.03							.02					.01	.03		T.			0.23
Longmire Springs	Puget Sound																																
Lost Creek	Columbia													.26															T.		.10	T.	0.36
Lucerne	...do																																
Lyle	...do																																
McCumbers Ranch	...do															.05																	0.05
Merritt	Menatchie																																
Mottinger	Columbia																																0.00
Mount Pleasant	...do															.07													.16	T.			0.23
Moxee	Yakima			T.			.10									T.																	0.10
Newport	Pend d'Oreille															.05																T.	0.05
Nighthawk	Okanogan																																

TABLE 2.—*Daily precipitation for August, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Washington—Cont'd.																																	
North Head	Coast				.03									.05	.06	.13							.02					.01	.10			.05	0.45
Northport	Columbia				.05		.11								1.00		T.												T.			.20	1.36
North Yakima	Yakima				.01			.11								T.														T.			0.12
Nutland	Columbia															.04																	0.04
Odessa	do																																
Olga	Puget Sound													.28	.06								.04	T.					.12		T.		0.50
Olympia	do													T.															.02			.03	0.05
Omak	Okanogan																																
Oroville	do																																
Peola	Snake																												T.			.03	0.03
Pomeroy	do																							T.					T.				T.
Port Crescent	Coast													.02		.06						.07	T.						T.		T.	.01	0.16
Port Townsend	Puget Sound													.13	.01	.28													.11		T.	T.	0.53
Pullman	Palouse																													T.			T.
Quinault	Coast													.12	.18								.16	.01					.17		.01	T.	0.65
Republic	Kettle								T.						.12	.85													.05		T.	.11	1.13
Rex Creek	Columbia																																
Ritzville	do																															.10	0.10
Rock Lake	Palouse																															T.	T.
Rosalia	do																																0.00
Russells Ranch	Yakima								T.							T.														T.			T.
Scenic Hot Springs	Puget Sound																																
Seattle	do													T.	.08	.01													.02			.06	0.17
Sedro-Woolley	do														.95	.05							.25						.36		.04	.20	1.85
Sixprong	Columbia																																0.00
Skagit Power Dam	Puget Sound																																
Snohomish	do													.32									.01					.09			.03		0.45
Snoqualmie Falls	do													.09	.04	.09	T.												.12	.02	T.	T.	0.36
Snoqualmie Pass	Yakima																																
Snyders Ranch	Columbia			.15			.10		.20															T.								.48	0.93
South Bend	Coast													.02	.05	.19							.02					.01	.02	.01		.01	0.33
Spokane	Spokane																							T.					.01			.14	0.15
State University	Puget Sound															.36														.01			0.37
Stokes Ranch	Columbia				.25		.08	.07	.09	T.						T.														T.		.46	0.95
Sullivan Lake	Pend d'Oreille																																
Sumner	Puget Sound													.02	T.	T.													.14			.06	0.22
Sunnyside	Yakima							.02																								T.	0.02
Tacoma	Puget Sound													T.	T.	.01													.11		T.	T.	0.12
Tatoosh Island	Coast	T.			.01	.02	.01		T.	T.		T.	T.	.10	.03	.02	T.			T.		.02	.09				T.	T.	.10		T.	.02	0.42
Tieton	Yakima															T.													T.			T.	T.
Touchet	Columbia																												T.				
Touchet Ridge	do																												.15				0.15
Trinidad	do							T.																									T.
Twin Sister Lakes	Yakima																																
Twisp	Columbia																																
Tyee	do						.03																									.02	0.05
Upper Clealum Valley	Yakima																																
Vancouver	Columbia															.13													.16				0.29
Vashon Island	Puget Sound															.07													.12			.33	0.52
Wahluke	Columbia																															.17	0.17
Wallace	Okanogan		T.						T.						.07														.18		.04	.31	0.60
Walla Walla	Columbia																												T.			.11	0.11
Waterville	do																																
Wenatchee (near)	do				.01			T.																								.40	0.41
West Branch	Spokane																																
Wilbur	Columbia				T.																								T.				T.
Yale	do															.05													.25				0.30
Zindel	Snake																																
Oregon.																																	
Albany	Willamette																												.08				0.08
Ana River	Southeast Drainage																																0.00
Ashland	Rogue																																0.00
Astoria	Columbia						T.							.07	T.	.27	T.					.01	T.					T.	.19	.02		.02	0.58
Bagleys Ranch	Snake									.07																							0.07
Baker City	do																																
Bay City	Coast													.03	.06	.07		T.											.09	.05		.03	0.33
Bear Creek	Deschutes																																
Bear Valley	John Day																											T.					T.
Beach Creek	do															T.														T.			T.
Bellfountain	Willamette																												.06				0.06
Bend	Deschutes																																
Big Basin	John Day															T.										T.							T.
Birch Creek	do															.01																	0.01
Black Butte	Willamette																												.05				0.05
Blalock	Columbia															T.																	T.
Blue M't'n Sawmill	Umatilla																.04												.35				0.39
Buena Vista	Snake				.02					.02																			T.				0.04
Burns	Southeast Drainage																																0.00
Burns Mills	do																																0.00
Butte Falls	Rogue																																0.00
California Gulch	Umatilla																																0.00
Canyon City	John Day																												T.				T.
Cascade Locks	Columbia															.06													T.				0.06
Cascadia	Willamette																												.40				0.40
Cazadero	do															.13													.10	.03			0.26
Christmas Lake	Southeast Drainage																																0.00
Columbia Mine	Snake									.06																			T.				0.06
Condon	John Day																																
Coquille River L. H.	Coast									.03																			.04				0.07
Cornucopia	Snake									.15	T.																			.01			0.16
Corvallis	Willamette																												.01				0.01
Cracker Creek	Snake									T.						.01													T.	T.		T.	0.01
Crescent	Deschutes																																
Dayville	John Day																.01																0.01
Deadwood	Willamette																												.02				0.02
Diamond "H"	Southeast Drainage																																
Doraville	Columbia				T.									T.	.01	.15					T.		T.					T.	.41	.02		T.	0.59
Drain	Umpqua																																0.00
Dufur	Columbia															T.																	T.
Duncan	Umatilla															.40													.20			.50	1.10
Echo	do																																0.00
Elkhorn Ranch	Coast																																
Ella	Columbia																																0.00
Embody	Willamette																																0.00

TABLA 2.—*Daily precipitation for August, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Cont'd.																																	
Eugene	Willamette																											T.					T.
Fairview	Coast																												.25				0.25
Fall City	Willamette																												.06				0.06
Fir Glen	Coast																																0.00
Florence	...do																			.03									.04				0.07
Forest Grove	Willamette																																
Fort Rock	Interior																																0.00
Galice	Rogue																																0.00
Gardiner	Umpqua																												.14				0.14
Glencoe	Columbia																																
Gibbon	Umatilla															.07													.20			.34	0.61
Glendale	Umpqua																																0.00
Glenora	Coast															.10													.11				0.21
Gold Beach	Rogue																																0.00
Granderonde	Coast													T.														.05					0.05
Granite	John Day															T.																	T.
Grants Pass	Rogue																																0.00
Grass Valley	John Day																																0.00
Greenhorn	Snake									T.	T.					.06	T.												.03	T.			0.09
Grindstone	Deschutes																																0.00
Gumboot	Snake																												.04			.02	0.06
Gurdane	Columbia															T.																	T.
Happy Home	Umpqua																																0.00
Hay Creek	Deschutes																																0.00
Hazeldell	Willamette																												T.				T.
Head Works	...do															.09																	0.09
Heppner	Columbia																																0.00
Hermiston	Umatilla																T.															T.	T.
Hilgard	Grande Ronde									T.							.40																0.40
Hood River	Columbia															T.																	T.
Hoover	Willamette																												.24				0.24
Howardville Station	Grande Ronde																.19													.19			0.38
Huntington	Snake																																0.00
Ibex Mine	John Day									.05						T.	T.												.02	T.			0.07
Ironside	Snake																																0.00
Jacksonville	Rogue																																0.00
Joseph	Grande Ronde															.20														.05			0.25
Klamath Agency	Klamath																																0.00
Klamath Falls	...do																																0.00
La Grande	Grande Ronde																.18													.11			0.29
Lakeview	Pitt							.01	.02	.01																							0.04
Lilyglen	Rogue																																0.00
Long Creek	John Day															.08													T.				0.08
Long Valley	Pitt																																0.00
Madras	Deschutes											T.																					T.
Maury	...do																																
McKinzie Bridge	Willamette																												.05	.03			0.08
McMinnville	...do															T.													T.				T.
Meacham	Umatilla																.50						.90										1.40
Merrill	Interior Drainage																																0.00
Metolius	Deschutes																												T.				T.
Mikkalo	John Day															.03																	0.03
Miller Prairie	Columbia																																0.00
Miramonte Farm	Willamette															.01																	0.01
Monroe	...do																												.01				0.01
Mountainhome	Columbia														T.	.20													.19				0.39
Mount Angel	Willamette																												.21				0.21
Mount Hood	Columbia														T.																		T.
Mountain Park	...do																												.04	T.			0.04
Mountain Ranch	Rogue																																0.00
Musick	Umpqua																																0.00
Newport	Coast														.10						.01												0.11
Ochoco	Deschutes															T.																	T.
Ochoco Creek	...do																																0.00
Owyhee	Owyhee																																0.00
Paisley	Southeast Drainage																																0.00
Paulina	Deschutes																																0.00
Pendleton	Umatilla															T.																	T.
Persist	Rogue																																0.00
Pilot Rock	Umatilla															.02																	0.02
Plush	Southeast Drainage																																0.00
Pompeii	Columbia															T.													.46	.12			0.58
Portland	Willamette															.05													.08				0.13
Post	Deschutes																																0.00
Power House	Walla Walla															T.	.01												T.		T.	.22	0.23
"P" Ranch	Southeast Drainage																																
Prineville	Deschutes																												T.				T.
Prospect	Rogue																																
Ramsey	Columbia																																0.00
Range	John Day																																0.00
Ray Creek	Columbia															T.																	T.
Reston	Umpqua																																0.00
Richland	Snake									.05																							0.05
Riverdale Ranch	Deschutes																																0.00
Riverside	Malheur																																0.00
Rock Creek	Willamette																												T.				T.
Roseburg	Umpqua																																0.00
Rosland	Deschutes																																0.00
Salem	Willamette																												.02				0.02
Seneca	Southeast Drainage																																
Silver Lake	...do								T.																								T.
Siskiyou	Rogue																																0.00
Sisters	Deschutes																																0.00
Sparta	Snake																																
Stafford	Willamette															T.													T.				T.
Starkey	Grande Ronde																																0.00
Sugar Creek	Deschutes																																0.00
Summit	Willamette																																0.00
Summit Prairie	Deschutes																																0.00
Susanville	John Day															.03													.03				0.06
Tamarack	...do																																0.00
Telocaset	Snake																										T.						T.
The Dalles	Columbia																																0.00
Tinroof Cabin	Umatilla															.05														T.			0.05

TABLE 2.—*Daily precipitation for August, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Cont'd.																																	
Toledo	Coast														.02														.08				0.08
Trask	do																												.18			T.	0.26
Umatilla	Columbia																																T.
Unity	Snake																																0.00
Vale	Malheur										T.																						T.
Valley Falls	Southeast Drainage																																0.00
Van	Malheur															T.													.16				0.16
Wallace Orchard	Willamette																													.09			0.20
Walloupa	Grande Ronde									.05						T.	.06																0.06
Wallowa	do																.06																
Wamic	Deschutes																																0.00
Warmspring	do																																0.00
Wasco	Columbia																																
Welches	do															T.	.15												T.	.03	T.	T.	0.18
Weston	Walla Walla																																
Williams	Rogue																																0.00
Yonna	Interior Drainage																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, August, 1910. District No. 12, Columbia Valley.*

Date.	Montana.						Idaho.															
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonner's Ferry.		Hotspring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	72	47	86	51	86	43	87	57	81	42	95	60	87	55	85	46	88	46	91	61	91	42
2	77	44	83	45	80	44	85	51	79	40	88	47	86	56	83	45	85	45	85	57	85	43
3	72	46	86	43	81	36	93	53	85	41	94	51	90	54	84	47	82	46	84	56	84	37
4	76	48	85	47	84	41	94	53	86	46	92	52	95	56	87	45	82	45	87	51	87	46
5	96	46	82	47	84	41	94	56	76	46	90	52	96	58	83	47	84	46	90	51	90	46
6	73	51	86	43	83	33	87	54	80	40	90	50	87	53	85	46	82	46	85	49	85	45
7	82	47	86	46	82	36	87	55	84	40	92	53	89	54	86	46	84	46	86	51	86	44
8	84	52	86	46	79	37	86	54	87	40	90	50	90	56	86	46	84	46	86	51	86	44
9	85	50	83	47	82	34	85	55	86	41	92	53	90	56	86	46	84	46	86	51	86	44
10	84	50	92	49	82	41	96	57	89	45	96	54	96	58	86	46	86	46	91	56	91	46
11	84	47	85	51	84	39	93	60	88	49	98	58	98	60	86	46	86	46	91	58	91	46
12	79	49	86	47	80	44	96	56	86	46	94	54	96	58	86	46	86	46	91	58	91	46
13	79	50	83	51	81	40	94	54	84	44	92	53	94	57	84	46	84	46	89	58	89	46
14	72	46	78	46	79	38	91	51	71	44	90	51	92	54	81	46	82	46	86	56	86	46
15	95	46	85	44	83	35	94	46	93	46	92	52	96	56	86	46	86	46	91	56	91	46
16	70	48	78	49	76	36	93	54	84	46	96	56	98	60	86	46	86	46	91	58	91	46
17	74	48	85	49	82	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
18	76	48	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
19	77	48	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
20	76	48	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
21	73	48	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
22	75	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
23	76	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
24	77	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
25	76	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
26	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
27	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
28	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
29	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
30	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
31	73	46	85	49	81	36	94	56	86	46	96	58	98	60	86	46	86	46	91	58	91	46
Mns	73.8	44.4	79.8	44.9	80.8	36.0	85.1	52.6	78.3	42.7	89.2	51.2°	85.5	54.4	82.0	43.2	85.1	37.2	84.5	32.6	84.8	39.0

Date.	Shoshone.		Vernon.		Wallace.		Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	89	60	.....	.....	69	41	65	44	67	47	65	38	69	39	79	47	79	56	53	32	84	50	60	47	66	53	53	38	79	58	70	52	56	50
2	86	47	.....	.....	76	41	67	47	70	52	67	41	66	40	85	57	85	57	56	32	86	51	58	51	72	51	52	38	83	57	74	51	57	51
3	87	45	.....	.....	72	41	68	46	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
4	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
5	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
6	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
7	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
8	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
9	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
10	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
11	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
12	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
13	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
14	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
15	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
16	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
17	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
18	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
19	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
20	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
21	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
22	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
23	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
24	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
25	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
26	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
27	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
28	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
29	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
30	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
31	89	46	.....	.....	77	41	69	47	70	50	68	42	66	41	86	57	86	57	54	32	85	53	57	53	70	53	53	38	83	57	74	52	56	51
Mns	88.2	48.1	.....	.....	76.3	42.7	65.8	47.4	68.0	46.1	80.5	40.1	74.4	45.5	81.4	55.7	57.6	51.9	83.3	52.7	.....	.....	60.2	45.3	67.7	52.7	85.5	54.0	78.7	51.6	69.2	51.5	56.3	49.5

Washington.

TABLE 3.—*Maximum and minimum temperatures at selected stations for August, 1910. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker City.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	83	61	84	50	.....	.....	76	45	67	41	89	59	64	53	71	51	.....	.....	82	48	82	53	98	39
2	85	56	87	58	.....	.....	79	47	67	43	86	50	62	49	77	53	88	33	84	48	85	51	97	43
3	93	57	86	53	.....	.....	79	48	64	41	72	49	62	50	77	55	90	37	82	49	90	55	95	38
4	85	63	85	50	.....	.....	76	44	66	48	92	63	65	53	69	50	80	36	82	46	84	58	91	36
5	85	59	83	49	.....	.....	75	46	65	49	88	53	64	50	72	52	84	35	81	47	80	50	93	35
6	87	61	83	49	.....	.....	76	46	67	51	89	59	65	52	76	54	82	38	80	47	84	56	95	34
7	87	63	88	55	.....	.....	80	49	66	50	90	60	65	52	81	56	81	40	86	50	90	58	95	37
8	93	66	91	58	.....	.....	85	55	68	51	95	55	63	50	84	60	90	44	89	55	94	61	96	38
9	98	67	89	60	.....	.....	83	52	64	52	99	56	63	52	79	57	91	47	86	53	90	64	102	39
10	93	65	88	59	.....	.....	80	46	64	43	97	61	62	50	78	52	91	41	86	51	88	52	103	38
11	90	66	86	56	.....	.....	78	46	63	44	94	60	64	52	76	52	86	42	81	48	87	54	110	40
12	87	63	82	54	.....	.....	78	44	68	46	92	61	65	50	76	50	82	37	82	45	84	56	107	38
13	84	61	82	51	.....	.....	79	48	68	44	81	61	69	53	72	53	80	35	81	47	78	60	94	38
14	75	57	76	52	.....	.....	72	49	65	48	86	56	66	49	70	56	72	49	74	48	75	53	88	51
15	69	52	76	45	.....	.....	70	45	65	48	77	52	66	45	65	51	68	36	73	46	71	54	87	36
16	79	50	84	45	.....	.....	80	42	65	52	80	40	60	49	80	48	74	29	82	44	82	43	86	34
17	89	55	89	53	.....	.....	87	48	58	41	88	43	59	47	88	59	84	34	89	48	88	47	88	32
18	92	61	93	57	.....	.....	88	49	58	48	95	46	61	53	91	57	95	39	91	50	92	50	100	42
19	95	65	95	57	.....	.....	86	47	58	48	98	49	58	50	84	56	95	42	88	50	97	54	104	49
20	93	71	86	54	.....	.....	84	42	61	49	92	64	62	52	68	54	83	32	77	48	90	63	98	48
21	96	55	84	52	.....	.....	72	44	65	36	91	57	64	42	69	56	77	34	73	48	79	55	94	49
22	82	57	83	59	.....	.....	71	42	66	38	90	56	66	44	68	52	80	36	80	43	74	53	95	42
23	74	51	84	59	.....	.....	74	41	68	49	84	59	65	42	73	49	.....	.....	78	46	78	50	87	66
24	70	41	87	48	.....	.....	88	41	76	54	78	42	87	40	74	52	.....	.....	84	40	74	52	78	47
25	74	43	93	63	.....	.....	75	51	64	41	76	35	65	46	78	60	.....	.....	84	46	77	41	79	31
26	77	54	82	53	.....	.....	68	45	61	45	81	40	67	50	63	50	.....	.....	73	48	71	45	93	35
27	78	52	77	47	.....	.....	71	43	61	39	82	51	62	46	67	53	.....	.....	75	43	75	49	89	38
28	71	55	69	47	.....	.....	68	46	66	42	80	53	67	52	64	53	62	28	67	50	71	54	84	39
29	74	52	78	40	.....	.....	70	42	65	45	78	51	67	47	69	54	80	40	75	43	75	48	79	39
30	83	51	83	46	.....	.....	77	43	68	46	83	39	63	46	74	51	80	36	82	43	82	55	85	30
31	79	56	79	49	.....	.....	75	47	66	44	82	49	66	53	69	53	76	36	78	47	76	58	88	37
Means	83.5	57.7	84.3	52.5	.....	.....	77.4	45.9	64.9	45.7	86.6	52.5	64.6	49.0	74.3	53.5	82.0[1]	37.5[1]	80.8	47.3	82.0	53.3	89.5	39.9

WEATHER, FORECASTS, AND WARNINGS FOR THE MONTH.

By EDWARD H. BOWIE, in charge of Forecast Division.

The prominent meteorological feature of the month was the cool wave that passed eastwardly over the country during the third decade. It gave the lowest temperatures of record for the month of August, with frosts, in the northern Rocky Mountain region and the middle and northern Plains States, and light frosts in the interior of New York and New England.

Good rains fell over much of the country east of the Rocky Mountains during the month, while in the northern Rocky Mountain region and the Pacific States drought was general. Forest fires passed over large areas in the northern Rocky Mountain region, and according to press reports caused the destruction of a large acreage of timber. The production of precipitation by artificial means was agitated and it was urged that the guns of the Army and Navy be employed in an effort to accomplish this. The question was referred to Prof. Willis L. Moore, Chief of the U. S. Weather Bureau, by the War Department and he replied as follows:

WASHINGTON, D. C., *August 25, 1910.*

General LEONARD WOOD,
Chief of Staff,
Washington, D. C.

MY DEAR GENERAL: I have the honor to return herewith the letter Mr. Arthur Brisbane addressed to the President, and to render the following report on the feasibility of Mr. Brisbane's scheme of liberating dust particles in the upper air for the purpose of forming nuclei on which condensation might begin in the process of artificially creating rainfall. Under separate cover I send your a copy of my text book on "Descriptive Meteorology," which has just come from the Appleton press. By signing the inclosed receipt you may retain the book for your official library, if you so desire. I would call your attention to chapter 3 of the book, which explains the process of condensation as affected by the dust motes in the air, and to chapter 12, which treats of precipitation. I have given much time to the investigation of the problem of creating rainfall artificially. It is true, as Mr. Brisbane says, that there is no rainfall in free air, except when dust motes furnish the "free surfaces" on which condensation may begin, and that in the absence of dust motes, as has frequently been demonstrated in the laboratory, it is impossible to produce condensation, even though the atmosphere be largely supersaturated. Aitken has made experiments in which he entrapped optically pure (dust free) air and after saturating the air has been able to create a miniature rainstorm by the liberating of fine dust particles inside the inclosure. But unfortunately for the theory of Mr. Brisbane, while dust is an absolute necessity for the creation of rainfall the presence of dust in large quantities does not create rainfall. In fact during long periods of drought the air is more highly charged with matter in suspension in the form of dust motes than at any other time, and the drought may continue for weeks or months while the quantity of dust increases. As you may see from the table at the bottom of page 36 of my book, extensive measurements have shown that even when it is raining there are 32,000 dust motes per cubic centimeter, and that when it is fair there are, at least, 100,000, and that even at the top of a high mountain when the wind is blowing away from a large city, the number is, at least, 1,600 per cubic centimeter. It is apparent, therefore, that there is always an abundance of dust motes, which, I will say for Mr. Brisbane's information, are far below the most powerful magnifying glass. They can only be detected by Aiken's condensation dust counter, which is described in full on pages 32 to 37 of my book.

The main difficulty in creating rainfall by the method that Mr. Brisbane suggests is this: Either the amount of the vapor content must be increased, or the temperature lowered. Mr. Brisbane speaks of distributing liquid air for the purpose of lowering the temperature aloft so that condensation may begin, but he fails to realize that the amount of energy necessary to manufature enough liquid air to have any appreciable effect on the enormous quantity of heat that would have to be met would probably take the combined energy of all the stationary and active engines in the city of New York, and millions of balloons, in order to affect a quantity of air sufficient to produce even the most moderate sprinkle of rain. It is my opinion that the processes of nature are on such a stupendous scale as to render ineffective any efforts of man to artificially create rain in paying quantities in the free atmosphere. Of course we can artificially produce it in various ways in the laboratory. We have dust in abundance, but man is unable to appreciably lower the temperature of such a great amount of air as is concerned in the production of any ordinary summer thundershower.

I am sorry I can not give a more favorable report, as I do not like to discourage the entering into science of such a talented man and lucid thinker as Arthur Brisbane.

Very respectfully,

(Signed) WILLIS L. MOORE,
Chief, U. S. Weather Bureau.

(Inclosure.)

A disturbance that appeared over Alaska at the close of July advanced eastwardly along the northern border, passing over the Great Lakes on the 3d, attended by showers and thunderstorms and brisk south, shifting to west, winds, and reaching the St. Lawrence Valley on the 4th. This disturbance was followed by a general change to lower temperature, which overspread practically all parts of the country east of the Rocky Mountains and terminated the period of excessively high temperatures in the Middle West. The area of high barometric pressure was accompanied by unseasonably low temperatures in the upper Lake region and the upper Mississippi Valley, and on the 4th light frosts occurred in the cranberry marshes of Wisconsin. Warnings of the occurrence of these frosts were issued on the morning of the 3d.

The forecast for the first week of August, issued Sunday, July 31, follows:

The distribution of barometric pressure over the North American Continent and the adjacent oceans is such as to indicate that there will be no general warm wave over the United States during the week beginning August 1. Temperatures will be moderate for the season over the eastern half of the country during the first part of the week, followed by a change to somewhat higher temperature in the Mississippi Valley Tuesday and in the Eastern States Wednesday. In the Northwestern States, the Rocky Mountain and Plateau regions, temperatures will be near or somewhat below the seasonal average. A disturbance will move eastward from the Rocky Mountain region Monday or Tuesday and reach the Atlantic States by Thursday, the 4th. It will be preceded and attended by unsettled weather and showers and be followed by a change to lower temperature.

The mean temperature for the week was generally below the normal by small amounts over the entire northern and western portions of the country, while over the southern portions of the Great Plains region and thence eastward over the Southern States to the Atlantic coast it was slightly above the normal. Showers were frequent and the rainfall above the normal during the week in the South Atlantic and Gulf States, the lower Mississippi Valley and the Plains States, and the Rocky Mountain region, and fairly well-distributed rains occurred in the Lake region and New England.

The special weekly forecast issued Sunday, August 7, was to the effect that there would be no abnormally high temperatures throughout the country during the week begimning August 8, and that a disturbance would move eastward from the Middle West during the first part of the week and cause showers over the eastern half of the country.

Generally unsettled, cloudy weather prevailed at the beginning of the week over the districts east of the Rocky Mountains, with local showers in the Missouri Valley and over portions of the Gulf and South Atlantic States. Local rains continued at intervals during the next 3 days, followed by a short period of fair weather, attending an area of high barometric pressure that moved eastwardly from the Northwestern States and reached the Atlantic coast at the close of the week. On the 12th and 13th, local rains again set in over the east Gulf and South Atlantic States, and showers and thunderstorms occurred at many points from the upper Lake region southwestward to the Rocky Mountain region. The weekly rainfall was above the normal in the upper Mississippi Valley, the Plains States, the middle Rocky Mountain region, and over portions of the Gulf and Atlantic States. Temperatures during the week were below the normal over the interior of the country and the Pacific coast States, and were above the normal by small amounts from the extreme upper Mississippi Valley eastward over the Great Lakes to northern New England, over Texas, and on the middle Gulf coast.

An extensive area of low barometric pressure passed eastward over Europe to Siberia during the week ending the 14th; it was attended by general rains, and at the close of the week another storm area was approaching the British Isles.

On the 14th the following weekly forecast was issued:

The distribution of barometric pressure over the North American Continent and the Atlantic and Pacific oceans is such as to indicate that there will be a continuation of temperatures near or slightly below the normal over the greater part of the country during the week beginning August 15. A disturbance will form over the Rocky Mountain region during Monday and move eastward attended by unsettled weather and showers and reach the Atlantic States by the middle of the week. It will be followed by fair and cool weather.

The barometric pressure was abnormally low and the weather unsettled and showery during the week beginning on the 15th over the British Isles and northern Europe, and a disturance passed easwardly through Siberia; this disturbance was of marked intensity and the barometric pressure at its center on the 17th was near 29.00 inches. Conditions in the West Indies during the first part of the week were unsettled and there were faint indications of a disturbance on the 14th in the vicinity of Barbados; it, however, did not develop into a well-defined storm. In connection with the slight barometric depression noted in the eastern Carribean Sea on the 14th, the following extract from the log of the British S. S. *Ceareuse*, Capt. W. Davies, voyage New York to Barbados, is of interest:

When northward of Barbados on August 11, the whole sky was covered with a thin watery film of cirro-stratus clouds. During the following night we experienced frequent squalls with rain. The squalls commenced with sharp gusts of wind lasting about 5 minutes, followed by periods of calm and heavy rains, with steady barometer. On the 12th, at 8 a. m., slight sea swell from the southeast gradually increased as the day advanced, but did not reach the height of a swell in the front of a storm. Between noon and 1 p.m. the barometer dropped from 29.90 to 29.85 and a heavy bank of cumulus clouds appeared in the horizon from the northeast through east to south; wind northeast by east and force 5 or 6. I assumed that a hurricane was passing in the vicinity some distance to the south and west. Throughout the day the wind backed slowly toward the southeast and after sunset there were terrific squalls with heavy rains.

In the United States the temperature at the beginning of the week was near the normal in all districts, but cooler weather overspread the extreme Northwestern States and by Wednesday had advanced to the upper Missouri Valley, with temperatures below 40° in portions of Montana, Wyoming, and North Dakota, and at exposed points in the northern Rocky Mountain region temperatures were near freezing, with frosts, which were successfully forecast. The cool wave moved eastward, gradually overspreading the Mississippi and Ohio valleys, the Lake region, and the Atlantic States by the close of the week. Toward the end of the week warmer weather overspread the western districts, and by the close of the week had advanced into the central valleys. The area of low barometer referred to in the weekly forecast of the 14th advanced eastward and caused good rains in nearly all districts from the Plains States to the Atlantic coast.

The forecast issued Sunday, the 21st, was as follows:

The indications are that warm weather will prevail during the greater part of the coming week in the Eastern States and during the first part of the week in the Middle West. A change to cooler weather will overspread the Northwestern States Tuesday or Wednesday and advance thence eastward to the Eastern States by the close of the week. A disturbance will appear in the Northwest Monday or Tuesday and move eastward, attended by unsettled weather and local rains, and reach the Atlantic States during the latter part of the week. Showers will continue the greater part of the week in the Southeastern States.

During this week in the United States the prominent meteorological feature was the cool wave that passed eastwardly over the country from the Canadian Northwest. It gave the lowest temperatures of record for the month of August in the northern Rocky Mountain region and the Plains States, and snow in Wyoming and western Montana; it caused frosts in Idaho, Montana, Wyoming, Colorado, Nebraska, North Dakota ,Minnesota, and Wisconsin, and light frosts at exposed places in New England and New York. Frost warnings were issued in ample time for precautionary measures to protect, where possible, growing crops.

In connection with the forecasting of this cool wave the following extracts from the press from widely separated points are taken:

The day was a great triumph for the weather man. The particular prophet in this case was Prof. Willis L. Moore, head of the Bureau at Washington. And the prophecy was on long time, as weather forecasts go. It was made last Sunday. It was accurate to the hour and to distance, direction, and temperature; geographically correct—absolutely exact.

The Sunday forecast said that the wave would start in the Northwestern States and sweep east across the country. For Oklahoma and vicinity Thursday was the day set for the cold spell, and the cold spell came. No one but the doubter was disappointed. * * *—*From the Oklahoman, Oklahoma City, Okla.*

The present remarkably cool weather for this season of the year was accurately forecast by the United States Weather Bureau 1 week in advance. * * *—*From the Courier-Journal, Louisville, Ky.*

The Weather Bureau at Washington predicted last Sunday that a cold wave would strike this vicinity about the middle of the week, didn't it? And it said that the cold wave would be preceded by very hot weather. * * * The long-distance forecasting department of the Washington Weather Bureau scored one of the biggest tallies in its history Thursday morning when the cold wave came along. * * * *From the Springfield Republican, Springfield, Mo.*

The official forecaster's reputation as a successful long-range forecaster is better than ever in this vicinity. His cool wave for the East, predicted a week ago, arrived last night on scheduled time, and the temperature consequently was "in the dumps" over night. There were no frost bites, to be sure, but the drop in temperature was sufficient to justify the "cool wave" forecast. * * *—*From the Transcript, Boston, Mass.*

The observer on last Monday morning published a weather prediction issued from Washington, D. C., stating that chilly blasts would sweep across the country during the week. * * * This forecast was read by many, but most people straightway dismissed it from their minds. During the week, however, there followed such a remarkably accurate verification of the prediction made days before the cold started, that the public sat up and took notice. * * * It only affords another striking illustration of the remarkable progress being made in the development of the weather science, and shows also what an excellent and highly valuable service is being given by the Government in this department. * * * The wave advanced true to form and reached the Atlantic by Saturday morning. It pays to listen to the weather man.—*From the Daily Observer, Charlotte, N. C.*

The precipitation during the week beginning August 22, was confined as a rule to local showers at widely scattered points. Some heavy rains occurred over the upper Lake region during the early and middle portions of the week and in the lower Ohio Valley and along the Gulf and south Atlantic coasts during the middle and latter part of the week.

A disturbance that appeared in the Northwest Tuesday, the 23d, moved eastward to the north Atlantic coast on Friday, and during its passage over the Great Lakes it caused southwest, shifting to northwest, gales. Storm warnings had been ordered for the Great Lakes previous to the occurrence of these high winds and no reports of loss to shipping in connection with this storm are of record.

A tropical storm of moderate intensity developed over the eastern portion of the Carribean Sea on the 23d and after moving westward, it passed northwestward over the Bahama Islands to a position a considerable distance off the Georgia coast, where its recurve to the northeast was obstructed by high pressure to the north and east, and it was forced inland over Georgia and the Carolinas, causing torrential rains on the 29th and 30th. Wireless reports from vessels off the south Atlantic coast while this storm prevailed, were to the effect that high winds and seas, and heavy rains were in progress. Advisory warnings were sent to ports on the Atlantic and Gulf coasts daily following the appearance of this disturbance in the West Indies, and no loss of vessels or lives has yet been reported. While the disturbance was in progress off the south Atlantic coast another storm developed over the middle Gulf and moved thence westward and passed inland near the mouth of the Rio Grande, on the 31st. Advisory warnings were issued on the 27th and northeast storm warnings were ordered for the Texas coast the morning of the 30th. High winds and high tides were experienced along the lower Texas coast, and there was some damage to property in the vicinity of Brownsville.

The following remarks from the Corpus Christi Daily Caller of August 31 referred to the work of the Bureau in connection with this storm:

On account of boisterous seas and unfavorable weather reports, the *Grey Fox* yesterday hugged Central Pier, not venturing forth on her customary visit to Tarpon. Several other boats, mostly fishing craft, were deterred from sailing by the red flags floating from the United States signal pole. This is one of many concrete examples of the value of the Weather Bureau.

The international weather charts prepared daily at the Central Office showed unusual weather conditions over many parts of the Northern Hemisphere during the week that ended the 28th. Stormy weather prevailed much of the week over Europe and the British Isles, and a disturbance of marked intensity passed eastward through Siberia to the Bering Sea.

On the 28th the following weekly forecast was issued.

The distribution of barometric pressure over the Northern Hemisphere is such as to indicate that temperatures near or below the normal will prevail over the greater part of the United States during the week beginning the 29th. A disturbance will appear in the Northwest Monday or Tuesday and move eastward, attended and preceded by unsettled, showery weather and rising temperature, and reach the Atlantic States by the latter part of the week. This disturbance will be followed by cooler, with a probability of frosts in the Northwest. Unsettled weather is indicated for the first part of the week along the south Atlantic and Gulf coasts.

Rains occurred over practically all parts of the country in connection with this disturbance, and showers on several days in the far Northwest extinguished the forest fires that were in progress in that region. Light frosts and freezing temperatures were reported from the northwest during the first part of the week.

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	80	− 2	Missouri Valley	69	+ 2
Middle Atlantic	78	+ 7	Northern slope	53	+ 1
South Atlantic	85	+ 3	Middle slope	66	+ 7
Florida Peninsula	81	+ 1	Southern slope	59	− 2
East Gulf	79	− 1	Southern Plateau	48	+ 6
West Gulf	72	− 3	Middle Plateau	38	+ 5
Ohio Valley and Tennessee	71	− 1	Northern Plateau	33	−10
Lower Lakes	69	− 2	North Pacific	76	+ 9
Upper Lakes	75	0	Middle Pacific	56	−11
North Dakota	65	+ 1	South Pacific	63	− 3
Upper Mississippi Valley	70	0			

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	5.4	+ 0.4	Missouri Valley	4.5	+ 0.4
Middle Atlantic	5.8	+ 0.7	Northern slope	4.3	+ 0.4
South Atlantic	5.9	+ 0.7	Middle slope	4.8	+ 1.0
Florida Peninsula	5.2	0.0	Southern slope	3.9	0.0
East Gulf	5.0	− 0.2	Southern Plateau	3.6	− 0.1
West Gulf	3.9	− 0.1	Middle Plateau	2.9	− 0.4
Ohio Valley and Tennessee	4.4	− 0.1	Northern Plateau	2.0	− 0.3
Lower Lakes	4.7	+ 0.1	North Pacific	5.1	− 0 2
Upper Lakes	5.7	+ 1.0	Middle Pacific	3.4	0.0
North Dakota	4.9	+ 0.9	South Pacific	2.1	− 0.5
Upper Mississippi Valley	5.0	+ 0.8			

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	66.2	− 0.9	+13.5	+ 1.7
Middle Atlantic	15	71.8	− 0.8	+ 9.0	+ 1.1
South Atlantic	10	77.6	− 0.2	+ 2.5	+ 0.3
Florida Peninsula*	8	80.9	− 0.6	− 2.9	− 0.4
East Gulf	11	80.2	+ 1.0	− 1.0	− 0.1
West Gulf	10	82.8	+ 2.0	+ 4.4	+ 0.6
Ohio Valley and Tennessee	13	74.4	− 0.4	− 0.7	− 0.1
Lower Lakes	10	69.6	+ 0.1	+ 7.3	+ 0.9
Upper Lakes	12	66.4	+ 0.4	+19.0	+ 2.4
North Dakota*	6	62.7	− 3.6	+23.6	+ 3.0
Upper Mississippi Valley	14	72.8	− 0.1	+ 9.9	+ 1.2
Missouri Valley	12	72.5	− 1.3	+14.8	+ 1.8
Northern slope	9	64.1	− 2.6	+20.4	+ 2.6
Middle slope	6	74.8	− 0.4	+15.4	+ 1.9
Southern slope*	8	81.5	+ 1.9	+10.9	+ 1.4
Southern Plateau*	10	77.3	+ 1.3	+11.6	+ 1.4
Middle Plateau*	10	69.3	− 0.3	+10.2	+ 1.3
Northern Plateau*	10	65.2	− 2.6	+ 9.5	+ 1.2
North Pacific	7	58.4	− 2.7	− 2.2	− 0.3
Middle Pacific	7	65.3	− 1.5	− 1.9	− 0.2
South Pacific	4	70.4	− 0.1	+ 8.0	+ 1.0

*Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		Inches.	Inches.
New England	11	2.38	66	− 1.2	− 3.3
Middle Atlantic	15	2.55	59	− 1.8	− 3.8
South Atlantic	11	9.00	148	+ 2.9	− 3.5
Florida Peninsula*	8	6.53	94	− 0.4	− 6.0
East Gulf	11	3.63	73	− 1.3	− 4.5
West Gulf	10	2.12	70	− 0.9	− 5.3
Ohio Valley and Tennessee	13	2.01	59	− 1.4	− 1.0
Lower Lakes	10	2.47	83	− 0.5	− 1.9
Upper Lakes	12	3.41	113	+ 0.4	− 4.7
North Dakota*	6	1.61	67	− 0.8	− 6.4
Upper Mississippi Valley	15	2.88	91	− 0.3	− 6.7
Missouri Valley	12	4.81	141	+ 1.4	− 4.4
Northern slope	9	0.83	67	− 0.4	− 2.8
Middle slope	6	3.67	149	+ 1.2	− 4.4
Southern slope*	8	2.36	96	− 0.1	− 7.9
Southern Plateau*	9	1.31	81	− 0.3	− 2.1
Middle Plateau*	11	0.55	73	− 0.2	− 4.0
Northern Plateau*	10	0.21	41	− 0.3	− 2.7
North Pacific	7	0.21	26	− 0.6	− 3.0
Middle Pacific	7	0.00	100	0.0	− 5.8
South Pacific	4	0.01	100	0.0	− 4.9

*Regular Weather Bureau and selected cooperative stations

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Chicago, Ill.	23	60	ne.	Sioux City, Iowa	2	65	n.
Jacksonville, Fla.	12	56	s.	Do.	29	54	nw.
Oklahoma, Okla.	3	52	s.	Toledo, Ohio	23	50	s.
Point Reyes Light, Cal.	28	64	nw.	Do.	25	53	sw.
Roswell, N. Mex.	13	52	nw.	Williston, N. Dak.	29	50	w.
Salt Lake City, Utah	27	60	w.				

RIVERS AND FLOODS.

By Prof. H. C. FRANKENFIELD, in charge River and Flood Division.

The month of August marks the definite inauguration of the low-water season over the greater portion of the country, and during the present month conditions were much accentuated by the persistence of the drought over the northern half of the country from the Atlantic to the Pacific.

In many sections west of the Mississippi River the August stages were the lowest of record, while in the upper Mississippi River the stages, although not unprecedented, were sufficiently low to entirely demoralize navigation above the mouth of the Missouri River. The lower Missouri continued at a fair stage and for this reason only was navigation possible between St. Louis and the mouth of the Ohio River.

More detailed accounts of the low water will be found in the reports of the various district editors.

The effects of the drought were also experienced in the South Atlantic States where low stages prevailed at a time of the year when floods are by no means infrequent. The only semblance of a flood was one that resulted from heavy rains on the last two days of the month over the watershed of the Santee River. These rains caused a rapid rise in the various tributary streams

and on the morning of September 3, the stage of the Wateree River at Camden, S. C., was 25.2 feet, 1.2 foot above the flood stage. Warnings were issued on August 31, and the damage caused by the flood was inconsequential.

The flood service along the lower Rio Grande was reorganized during the month. Gage readings will be made whenever necessary at Eagle Pass, Laredo, and Mission, Tex., and arrangements have been made by the official in charge of the local office of the Weather Bureau at Houston, Tex., for the widespread dissemination of flood warnings as far south as Brownsville, Tex.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville on the Tennessee; Kansas City on the Missouri; Little Rock on the Arkansas; and Shreveport on the Red.

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

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C. FITZHUGH TALMAN, Librarian.

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Kähler, Karl. Über die Wirkung von Regenfällen und Böen auf das Potentialgefälle am Erdboden. p. 368–370.

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Wegener, Alfred. Die Grösse der Wolkenelemente. p. 354–361.

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Exner, F[elix] M. Über die Helligkeit des Himmels und das Erdlicht. p. 370–372. [Review of memoir by L. Yntema.]

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Bestelmeyer, A. Zur Theorie des Ballonvariometers. p. 763–768.

Prometheus. Berlin. Jahrgang 21. 14. September 1910.

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CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, August, 1910.

Station.	Temperature—in degrees Fahrenheit.							Precipitation—in inches and hundredths.					
	Section average.	Departure from the normal.	Monthly extremes.					Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest. Date.			Station.	Amount.	Station.	Amount.
Alabama	79.7	0.0	Riverton	102	19	Riverton	54 2	2.73	− 1.75	Auburn	6.07	Livingston	0.36
Arizona	81.8	+ 0.2	Parker	119	26	Grand Canyon	40 18	2.10	− 0.31	Oracle	5.32	Sentinel	0.05
Arkansas	79.2	− 0.4	Fort Smith	104	3	Bergman	43 27	3.92	+ 0.81	Camden	9.76	Wynne	0.90
California	72.5	0.0	Mammoth Tank	120	30†	Quincy	20 31	0.01	− 0.05	Needles	0.91	Many Stations	0.00
Colorado	64.0	− 0.3	Hoehne	108	24	Fraser	15 26	1.74	− 0.25	Cascade	4.76	Dillon	0.15
Florida	80.6	− 0.7	3 stations	99	8†	2 stations	63 3†	8.72	+ 1.32	Malabar	16.16	Bonifay	2.27
Georgia	79.1	− 0.3	Blakely	102	8†	Clayton	55 14	3.68	− 1.97	St. George	14.17	Eastman	0.77
Hawaii (July)	72.3	.....	Molokai Ranch	91	29	Humuula, Hawaii	38 10	4.70	.....	Hakalau, Hawaii	23.55	Waiopae R'ch Maui	0.00
Idaho	64.4	− 2.6	Garnet	106	19	Chesterfield	11 25	0.09	− 0.44	Paris	0.95	33 stations	0.00
Illinois	73.2	− 0.7	Flora	99	17†	Lincoln	37 26	2.73	− 0.39	Pana	6.71	La Harpe	0.38
Indiana	72.1	− 1.5	Logansport	101	15	Cambridge City	38 27	2.22	− 1.19	Knox	6.19	Cambridge City	0.42
Iowa	71.9	+ 0.1	Bedford	104	22	3 stations	36 26	3.88	− 0.11	Atlantic	11.22	Chariton	0.37
Kansas	75.8	− 1.3	Alton	110	21	Alton	33 26	4.48	+ 1.22	Agricultural College	10.70	Norton	1.08
Kentucky	74.0	− 1.7	Hopkinsville	100	17	Farmers	46 27	2.72	− 0.72	Berea	6.09	Cadiz	0.16
Louisiana	82.8	+ 1.3	Ruston	105	23	Minden	61 11	4.42	− 0.51	Lake Charles	10.63	Grand Cane	0.50
Maryland and Delaware	72.8	− 0.9	3 stations	95	3†	Frostburg, Md	41 27	2.92	− 1.22	Princess Ann, Md.	12.63	Frederick, Md	0.54
Michigan	66.7	+ 0.3	Charlotte	101	22	Newberry	29 31	3.08	+ 0.29	Bay City	6.05	Morenci	0.98
Minnesota	65.8	− 0.8	Albert Lea	99	16	3 stations	28 31	2.35	− 0.92	New Ulm	5.97	Cass Lake	0.40
Mississippi	80.9	+ 0.5	3 stations	100	17†	4 stations	60 1†	3.13	− 1.03	Pearlington	9.96	Booneville	0.61
Missouri	74.7	− 1.4	2 stations	103	23†	3 stations	40 27	2.77	− 0.53	Bolivar	10.07	Olden	1.21
Montana	61.3	− 2.6	Glendive	103	8	Grayling	5 24	0.92	+ 0.01	Glendive	4.17	Saltese	0.00
Nebraska	70.4	− 2.3	Culbertson	104	21	Canton (near)	23 24	4.27	+ 1.54	Lincoln	14.21	Minatare	0.14
Nevada	69.3	− 0.7	Logan	111	6	Carlin	20 29	0.08	− 0.47	Jean	1.13	22 stations	0.00
New England*	65.7	− 1.5	Madison, Me	99	26	Woodstock, Vt	29 27	3.08	− 0.81	2 stations	5.72	Norfolk, Mass	0.83
New Jersey	70.4	− 1.5	Trenton	92	3	Layton	36 27	3.78	− 0.87	Haddonfield	8.46	Paterson	1.76
New Mexico	71.8	+ 1.4	Carlsbad	108	2	Truchas	34 13	2.89	+ 0.11	Montoya	9.83	Hermanes	0.12
New York	66.5	− 0.1	Addison	95	15	Nehasane	31 27	3.09	− 0.81	Old Forge	6.60	Setauket	0.89
North Carolina	75.0	− 0.8	Lamberton	98	3	Banners Elk	45 9	7.28	+ 0.63	Belhaven	17.67	Reidsville	2.39
North Dakota	63.1	− 2.4	New England	109	11	2 stations	24 26†	1.41	− 0.98	Fullerton	3.31	Larimore	0.34
Ohio	71.4	0.0	Vickery	100	17	3 stations	36 26†	1.58	− 1.48	Hudson	3.54	Chillicothe	0.14
Oklahoma	81.0	+ 0.1	Chikasha	115	3	Dacoma	39 26	3.94	+ 1.14	Hennessey	10.79	Chikasha	1.17
Oregon	62.7	− 2.7	Vale	110	11	Christmas Lake	18 29	0.08	− 0.49	Meacham	1.40	58 stations	0.00
Pennsylvania	69.8	− 0.1	Marion	98	3	2 stations	35 9†	2.61	− 1.47	West Chester	6.46	Skidmore	0.55
Porto Rico	79.1	− 0.6	2 stations	96	1†	Las Marias	54 21†	8.77	+ 0.80	Rio Piedras	17.33	Vieques	4.43
South Carolina	79.0	− 0.2	2 stations	101	3†	3 stations	60 21†	6.00	− 0.31	Georgetown	11.85	Blackville	2.87
South Dakota	68.0	− 2.3	Kadoka	106	21	Cottonwood	27 25	1.86	− 0.57	Ganvalley	5.51	Elk Mountain	0.23
Tennessee	75.9	− 0.8	2 stations	100	17†	Erasmus	49 11	2.60	− 1.41	Dickson	7.32	Savannah	0.31
Texas	85.2	+ 2.8	Haskell	114	2	Plemons	39 26	1.25	− 1.12	Brownsville	7.26	8 stations	0.00
Utah	69.8	− 0.2	St. George	107	7	Woodruff	20 30	0.79	− 0.29	Baker	3.64	2 stations	0.00
Virginia	71.8	− 2.4	Saxe	97	3	2 stations	45 7†	3.59	− 1.13	Petersburg	9.65	Stephens City	0.34
Washington	62.5	− 3.1	Hatton	104	19	2 stations	23 23†	0.36	− 0.39	Granite Falls	1.92	9 stations	0.00
West Virginia	70.8	− 1.2	Creston	98	29	3 stations	39 27	2.03	− 1.60	Marlinton	5.58	2 stations	0.70
Wisconsin	68.2	+ 0.8	Prairie du Chien	100	24	Prentice	31 19	3.62	+ 0.50	Plum Island	7.76	New Richmond	0.86
Wyoming	60.4	− 1.3	Moorcraft	101	20	3 stations	7 25	0.43	− 0.70	Knowles	1.85	Thermopolis	0.00

*Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. †Other dates also.

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, August, 1910.*

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.			Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
New England.							66.3	− 0.9									80	3.35	− 1.3									5.4	
Eastport	76	67	85	29.98	30.06	+ .10	60.8	+ 1.1	82	13	68	47	31	53	26	56	54	82	1.44	− 1.8	6	5,698	s.	26	s.	31	12	10	9	5.2	
Greenville	1,070	6	....	28.91	30.06	....	61.6	....	83	25	72	38	31	52	34	....	....	....	3.69	....	14	....	....	....	....	....	....	....	....	....	
Portland, Me.	103	81	117	29.95	30.07	+ .09	64.4	− 1.8	85	26	72	48	31	56	31	59	56	77	2.79	− 0.8	8	6,252	s.	36	w.	2	12	11	8	4.8	
Concord	288	70	79	29.75	30.06	+ .08	65.6	− 1.0	87	14	78	42	27	54	36	....	....	....	1.49	− 2.2	9	3,550	se.	25	w.	26	10	14	7	4.7	
Burlington	404	11	48	29.60	30.03	+ .06	65.2	− 0.9	82	25	75	42	30	56	31	....	....	....	2.76	− 1.2	9	7,723	s.	37	s.	25	7	13	11	6.0	
Northfield	876	16	70	29.13	30.07	+ .09	61.9	− 1.0	84	25	74	34	30	50	39	58	56	82	2.57	− 1.4	12	4,732	s.	24	sw.	26	8	14	9	5.6	
Boston	125	115	188	29.94	30.08	+ .09	68.8	− 0.1	88	14	76	54	31	62	24	63	60	76	0.98	− 3.0	7	6,823	sw.	27	sw.	25	8	8	15	6.1	
Nantucket	12	14	90	30.07	30.08	+ .09	66.8	− 1.2	79	14	73	51	31	61	16	63	61	86	2.67	− 0.4	10	9,566	sw.	36	sw.	26	15	8	8	4.9	
Block Island	26	11	46	30.05	30.08	+ .09	68.2	− 0.5	80	13	73	57	31	63	16	65	63	85	2.34	− 1.1	9	9,329	sw.	35	ne.	17	18	5	8	4.5	
Narragansett	....	9	....	....	....	....	67.3	− 1.2	80	13	74	47	31	60	25	....	....	....	2.58	....	10	....	s.	....	....	....	17	8	6	....	....
Providence	160	141	165	29.92	30.09	+ .10	67.8	− 3.2	84	25	76	47	31	59	23	63	60	79	2.62	− 1.4	11	6,230	sw.	33	nw.	2	5	18	8	5.6	
Hartford	159	122	140	29.90	30.07	+ .08	68.8	− 0.1	84	14	79	48	27	59	29	62	59	77	2.98	− 1.6	10	5,209	s.	25	sw.	25	4	13	14	6.7	
New Haven	106	116	155	29.98	30.06	+ .09	69.2	− 0.9	84	25	78	50	27	61	22	63	60	74	3.21	− 1.8	12	6,020	s.	24	s.	25	11	13	7	4.8	
Mid. Atlantic States.							71.3	− 0.2										78	2.55	− 1.2									5.2	
Albany	97	102	115	29.94	30.04	+ .06	69.6	+ 0.1	86	25	79	47	27	60	28	62	58	71	1.38	− 2.6	6	5,882	s.	30	s.	4	10	17	4	5.0	
Binghamton	871	78	88	29.14	30.05	+ .06	66.2	− 1.3	88	4	77	40	27	56	36	....	....	....	1.10	− 2.2	5	3,879	e.	25	sw.	4	11	9	11	5.2	
New York	314	108	350	29.74	30.08	+ .06	72.2	0.0	85	25	79	57	27	66	18	65	61	72	2.13	− 2.4	12	6,659	s.	28	w.	5	7	11	13	6.3	
Harrisburg	374	94	104	29.67	30.06	+ .05	71.9	− 0.2	91	3	81	49	27	63	28	64	60	71	2.21	− 2.0	9	4,262	e.	29	w.	10	7	12	12	5.7	
Philadelphia	117	116	184	29.96	30.08	+ .08	73.2	− 0.6	86	25	80	57	27	66	19	66	63	75	5.72	+ 1.1	12	6,228	se.	26	sw.	25	5	10	16	6.8	
Scranton	805	111	119	29.22	30.08	+ .08	68.6	− 0.7	90	4	79	44	27	58	33	63	60	79	2.51	− 1.7	6	4,305	s.	30	sw.	4	5	12	14	6.3	
Atlantic City	52	37	48	30.02	30.07	+ .07	72.1	− 0.5	86	6	77	58	27	67	20	67	65	81	1.84	− 2.5	5	5,405	s.	23	w.	26	9	8	14	5.9	
Cape May	17	9	56	30.06	30.08	+ .08	72.8	− 0.6	86	5	79	58	27	66	22	68	66	84	3.90	− 0.4	13	5,828	se.	26	ne.	17	8	21	2	5.2	
Baltimore	123	100	113	29.93	30.05	+ .04	74.4	− 0.3	90	3	82	57	27	67	22	67	63	71	1.37	− 2.8	11	4,951	s.	22	s.	25	6	12	13	6.1	
Washington	112	62	85	29.93	30.05	+ .04	73.8	− 0.7	90	3	83	58	27	65	29	67	64	76	1.26	− 3.1	11	3,907	ne.	18	w.	26	10	11	10	5.4	
Cape Henry	18	9	58	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lynchburg	681	83	88	29.33	30.06	+ .04	73.3	− 1.5	91	3	82	59	28	65	27	68	66	83	2.32	− 1.9	16	2,488	ne.	18	se.	12	2	23	6	5.9	
Mount Weather	1,725	10	54	28.27	30.04	+ .03	68.5	− 0.9	83	3	76	52	27	61	21	62	60	80	1.91	− 1.7	12	9,030	se.	36	nw.	26	11	13	7	5.4	
Norfolk	91	102	111	29.95	30.05	+ .05	76.4	− 0.3	90	26	83	65	13	70	19	72	70	86	4.05	− 1.9	12	5,757	se.	33	sw.	4	7	11	13	6.2	
Richmond	144	189	197	29.90	30.05	+ .04	74.6	− 2.9	92	3	83	61	6	66	27	....	....	....	2.90	− 1.5	14	4,820	ne.	26	ne.	8	1	15	15	7.3	
Wytheville	2,293	40	47	27.72	30.04	+ .03	68.8	− 1.7	88	2	79	54	9	59	30	64	62	88	3.70	− 0.8	11	2,315	e.	24	w.	3	8	20	3	4.9	
S. Atlantic States.							77.6	− 0.2										85	9.00	+ 2.9									5.9	
Asheville	2,255	53	75	27.75	30.04	+ .02	70.6	+ 0.1	85	18	80	54	13	61	26	65	64	89	9.12	+ 4.3	17	4,304	se.	32	e.	30	9	13	9	5.7	
Charlotte	773	68	76	29.22	30.04	+ .02	76.6	0.0	92	26	85	63	22	68	23	70	68	81	4.82	− 0.7	12	3,957	ne.	28	s.	1	4	14	13	6.6	
Hatteras	11	12	47	30.03	30.04	+ .04	77.5	− 0.7	88	3	83	67	13	72	16	74	73	87	13.14	+ 7.3	24	7,813	sw.	36	se.	28	10	11	10	5.4	
Manteo	12	12	46	....	....	....	77.0	....	90	5	84	60	1	71	....	....	....	....	13.94	+ 8.0	11	....	sw.	....	....	....	9	14	8	....	....
Raleigh	376	103	110	29.64	30.03	+ .02	76.2	− 0.6	92	3	84	63	22	68	23	70	68	84	7.75	+ 1.8	16	4,632	ne.	32	n.	10	6	14	11	6.4	
Wilmington	78	81	91	29.93	30.03	+ .03	77.0	− 0.6	90	11	84	65	23	70	20	73	72	88	8.47	+ 2.0	18	4,734	sw.	25	sw.	4	4	11	16	6.6	
Charleston	48	14	92	29.96	30.01	.00	79.7	− 0.6	95	8	85	70	12	75	18	74	73	83	10.00	+ 3.0	14	7,422	s.	37	e.	21	6	18	7	5.7	
Columbia, S. C.	351	41	57	29.64	30.02	+ .01	78.5	− 1.0	93	8	87	62	22	70	23	72	70	82	8.20	+ 1.4	14	4,271	ne.	28	ne.	17	5	19	7	6.1	
Augusta	180	89	97	29.82	30.01	.00	79.8	+ 0.9	93	19	88	65	12	72	22	72	70	79	6.04	+ 0.5	8	4,167	ne.	33	ne.	12	10	14	7	5.2	
Savannah	65	150	194	29.94	30.01	.00	79.3	− 0.1	94	11	87	67	13	72	20	74	72	86	11.75	+ 4.2	15	7,328	s.	40	s.	11	8	13	10	5.5	
Jacksonville	43	96	129	29.95	30.00	− .01	80.5	+ 0.4	95	10	88	69	13	73	20	75	74	88	5.82	− 0.4	21	5,543	s.	36	s.	12	6	13	12	6.2	
Florida Peninsula.							81.5	− 0.2										91	6.69	+ 0.2									5.2	
Jupiter	28	10	46	29.95	29.98	− .02	80.7	− 0.8	91	8	87	68	24	74	19	76	74	83	10.46	+ 4.6	21	7,154	se.	36	sw.	24	8	23	0	4.7	
Key West	22	10	53	29.95	29.97	− .01	83.1	− 0.7	92	29	89	72	4	77	16	76	74	73	3.21	− 1.5	14	5,586	se.	29	se.	31	5	25	1	4.8	
Tampa	35	79	96	29.95	29.98	− .02	80.8	+ 0.8	92	6	88	70	13	74	20	75	74	86	6.39	− 2.2	16	4,242	ne.	33	s.	23	3	20	8	6.2	
East Gulf States.							80.2	+ 1.0										79	3.63	− 1.3									5.0	
Atlanta	1,174	190	216	28.81	30.03	+ .02	77.0	+ 0.9	91	1	86	64	13	68	25	69	66	75	2.49	− 2.0	8	6,141	ne.	36	nw.	4	13	10	8	4.8	
Macon	370	78	87	29.61	30.00	− .01	79.1	+ 0.9	92	19	88	65	13	70	23	....	....	....	2.61	− 1.6	11	3,908	ne.	30	nw.	10	8	13	10	5.6	
Thomasville	273	8	57	29.70	29.99	− .01	79.8	− 1.2	96	10	89	67	18	70	26	73	72	86	4.55	− 0.5	14	3,164	e.	22	sw.	5	13	13	5	4.6	
Pensacola	56	140	183	29.92	29.98	.00	81.1	+ 0.1	95	2	87	70	12	75	20	....	....	....	4.79	− 2.4	13	7,871	ne.	40	se.	25	9	15	7	5.2	
Anniston	741	9	57	29.25	30.03	+ .04	77.7	+ 1.3	92	31	88	61	1	68	29	....	....	....	3.19	− 1.3	14	2,994	se.	26	nw.	17	5	17	9	5.9	
Birmingham	700	11	48	29.27	30.02	+ .03	79.2	− 0.6	92	19	88	66	9	70	25	71	68	78	4.60	+ 0.1	9	3,486	e.	28	e.	2	5	18	8	5.8	
Mobile	57	98	106	29.91	29.97	− .01	82.6	+ 2.9	96	3	91	72	7	74	21	74	72	78	5.10	− 1.7	12	4,101	n.	24	n.	12	12	15	4	4.3	
Montgomery	223	100	112	29.75	29.99	.00	80.7	+ 1.0	94	17	90	68	23	71	23	73	70	76	1.86	− 2.4	6	3,817	ne.	23	s.	31	15	11	5	4.3	
Meridian	375	84	93	29.59	29.97	− .01	79.7	+ 1.2	94	8	90	63	2	70	28	72	70	79	3.37	− 0.2	9	2,689	e.	30	sc.	4	10	16	5	4.9	
Vicksburg	247	62	74	29.71	29.98	.00	81.8	+ 2.2	95	22	91	67	27	72	23	74	71	79	1.36	− 2.2	6	3,661	e.	34	nw.	9	7	20	4	5.6	
New Orleans	51	90	121	29.91	29.96	− .02	83.4	+ 2.4	94	9	90	70	11	76	20	75	72	78	6.01	+ 0.4	11	4,509	s.	30	se.	10	16	14	1	3.9	
West Gulf States.							82.8	+ 2.0										72	2.13	− 0.9									3.9	
Shreveport	249	77	84	29.70	29.96	− .01	82.0	+ 0.6	99	2	91	65	27	73	23	74	72	77	3.19	+ 1.0	7	3,273	se.	24	nw.	9	17	8	6	4.0	
Bentonville	1,303	11	44	28.63	29.97	.00	77.0	+ 0.5	97	23	87	50	27	67	30	....	....	....	3.92	− 0.1	4	2,952	s.	20	nw.	6	19	11	1	3.2	
Fort Smith	457	79	94	29.48	29.96	− .01	80.9	+ 1.5	104	3	90	59	27	72	26	72	70	76	3.91	+ 0.2	10	5,019	e.	39	nw.	9	13	8	10	4.9	
Little Rock	357	139	147	29.42	29.98	.00	79.0	− 0.2	94	22	87	61	27	71	21	73	71	82	3.82	+ 0.2	11	4,422	e.	40	ne.	25	8	16	7	5.6	
Brownsville	57	4	....	....	....	....	84.0	....	96	14	93	70	20	75	22	....	....	....	7.26	....	7	....	s.	....	....	....	....	....	....	....	....
Corpus Christi	20	69	77	29.91	29.93	.00	82.4	+ 0.3	94	26	88	73	31	77	17	76	75	82	2.76	+ 0.5	6	11,192	se.	48	e.	30	13	12	6	4.3	
Fort Worth	670	106	114	29.20	29.89	− .05	86.4	+ 3.5	104	2	96	67	27	76	28	71	64	55	0.26	− 1.6	4	6,976	s.	28	nw.	10	8	22	1	4.4	
Galveston	54	106	112	29.91	29.97	+ .06	83.8	+ 1.2	90	24	88	71	19	80	15	77	74	76	2.01	− 3.0	5	7,444	se.	25	e.	28	16	14	1	3.7	
Houston	....	....	....	....	....	....	84.6	....	98	12	94	72	19	75	23	....	....	....	2.45	....	6	5,279	s.	28	se.	19	18	13	0	3.3	
Palestine	510	73	79	29.42	29.94	− .03	84.4	+ 3.9	99	21	94	69	27	74	24	73	69	68	0.96	− 1.3	3	4,980	s.	31	ne.	25	15	14	2	3.9	
San Antonio	701	80	91	29.20	29.91	− .02	86.1	+ 4.1	100	21	98	72	24	75	26	72	67	63	0.37	− 2.3	4	4,420	se.	24	se.	31	18	12	1	3.4	
Taylor	583	55	63	29.35	29.96	+ .01	85.8	+ 4.1	101	21	97	70	26	74	26	....	....	....	0.05	− 2.4	2	6,325	s.	27	e.	29	23	8	0	2.5	
Ohio Val. and Tenn.							74.4	− 0.4										71	2.01	− 1.4									4.4	
Chattanooga	762	189	213	29.24	30.03	+ .03	77.2	+ 0.7	92	17	87	63	9	68	25	69	66	76	1.09	− 2.7	12	4,074	ne.	35	nw.	9	11	11	9	4.9	
Knoxville	996	93	100	28.99	30.02	+ .01	75.5	+ 0.8	90	18	85	61	23	66	24	68	66	80	3.86	− 0.1	11	2,944	ne.	19	sw.	6	7	18	6	5.3	
Memphis	399	76	97	29.60	30.00	+ .02	79.0	− 0.2	94	18	87	60	27	71	26	71	68	73	1.26	− 1.9	7	4,452	ne.	33	sw.	4	8	14	9	5.4	
Nashville	546	168	191	29.45	30.02	+ .02	76.8	− 1.0	94	18	87	59	27	67	27	69	66	74	1.73	− 1.7	6	4,477	ne.	49	sw.	9	12	10	9	4.8	
Lexington	989	75	102	28.99	30.04	+ .03	72.6	− 2.0	91	17	81	51	27	64	26	....	....	....	4.15	+ 0.6	9	5,075	sc.	36	sw.	21	14	7	10	4.9	
Louisville	525	111	132	29.46	30.04	+ .04	75.4	− 1.1	94	17	86	53	27	65	30	66	62	68	2.31	− 1.2	5	4,158	sc.	23	w.	25	17	9	5	3.6	
Evansville	431	72	82	29.55	30.01	+ .02	76.0	− 1.0	93	17	85	54	27	66	28	68	65	73	0.96	− 2.3	7	3,829	s.	25	s.	23	10	19	2	4.1	
Indianapolis	822	154	164	29.16	30.04	+ .04	72.8	− 0.8	90	17	82	53	27	63	27	64	59	66	2.75	− 0.6	5	5,519	s.	30	sw.	23	11	13	7	4.7	
Cincinnati	628	152	160	29.37	30.03	+ .02	74.6	− 0.9	93	17	85	54	27	64	29	64	59	62	1.26	− 2.1	4	3,690	se.	24	nw.	25	16	13	2	3.5	
Columbus	824	173	222	29.17	30.03	+ .02	73.4	+ 0.4	94	15	85	51	27	62	32	63	57	62	0.42	− 2.8	7	6,469	s.	38	n.	25	19	8	4	3.5	
Pittsburg	842	353	410	29.15	30.03	+ .02	72.8	+ 0.3	90	14	83	49	27	63	27	62	56	61	2.47	− 0.7	8	7,069	sw.	37	sw.	4	15	13	3	3.5	
Parkersburg	638	77	84	29.40	30.05	+ .04	73.5	+ 0.2	93	3	85	51	27	62	32	65	62	73	1.19	− 2.3	6	3,126	sc.	30	nw.	18	14	14	3	4.4	
Elkins	1,940	41	50	28.06	30.06	+ .04	68.0	− 0.4	90	3	82	47	27	54	35	61	59	84	2.70	− 1.0	9	2,054	s.	16	w.	5	10	13	8	5.1	
Lower Lake Region.							69.6	+ 0.1										80	2.47	− 0.5									4.7	
Buffalo	767	178	206	29.20	30.02	+ .03	69.4	+ 0.6	86	3	77	54	26	62	27	64	61	76	2.72	− 0.3	8	8,613	sw.	47	sw.	5	6	16	9	5.6	
Canton	448	10	71	29.55	30.02	....	66.8	− 1.0	86	3	78	41	30	56	38	....	....	....	2.69	0.0	9	7,600	sw.	39	sw.	26	10	16	5	4.6	
Oswego	335	76	91	29.65	30.02	+ .03	67.8	− 1.0	86	25	76	49	27	60	28	62	58	74	4.65	+ 2.0	12	6,358	s.	28	w.	26	11	10	10	4.7	
Rochester	523	86	102	29.47	30.04	+ .05	69.1	+ 0.8	89	3	78	49	27	60	28	61	57	70	3.10	+ 0.1	11	4,739	sw.	30	w.	4	12	10	9	5.1	
Syracuse	397	97	113	29.40	30.04	+ .05	68.7	+ 0.1	87	15	78	47	27	60	28	....	....	....	3.39	+ 0.1	10	7,498	s.	38	w.	4	11	11	9	5.2	
Erie	714	92	102	29.26	30.01	.00	70.0	+ 0.1	88	24	78	49	27	62	29	62	58	66	1.76	− 1.5	9	7,196	s.	34	sw.	25	14	13	4	4.5	
Cleveland	762	190	201	29.21	30.02	+ .01	70.0	− 0.4	89	17	78	50	27	62	31	63	58	68	1.08	− 2.1	6	9,470	se.	48	w.	25	15	12	4	4.1	
Sandusky	629	62	70	29.34	30.02	+ .01	71.7	+ .02	92	3	80	49	27	63	26	....	....	....	2.28	− 1.1	7	5,204	sw.	28	nw.	25	14	11	6	3.8	
Toledo	628	207	246	29.35	30.02	+ .02	71.8	+ 0.9	95	17	82	52	26	62	26	63	58	66	1.93	− 0.8	9	8,490	sw.	53	sw.	25	16	8	7	4.0	
Detroit	730	218	258	29.24	30.02	+ .01	70.6	+ 0.7	91	17	80	48	26	62	27	62	57	66	1.11	− 1.7	7	8,809	e.	47	w.	25	9	11	11	5.7	

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, August, 1910*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
Upper Lake Region.							**66.4**	**+ 0.4**									**75**	**3.41**	**+ 0.4**									**5.7**	
Alpena	609	13	92	29.34	30.01	+ .01	64.3	+ 0.5	86	22	74	43	26	55	30	59	56	77	2.84	− 0.5	11	6,939	nw.	35	w.	25	10	9	12	5.8	
Escanaba	612	40	82	29.33	29.98	− .01	63.2	− 1.3	77	21	71	44	26	56	28	59	56	81	5.22	+ 1.6	8	6,083	s.	27	nw.	25	8	9	14	5.7	
Grand Haven	632	54	92	29.31	29.98	− .01	67.8	0.0	86	15	77	51	19	59	27	63	59	74	3.21	+ 0.6	10	7,448	s.	46	w.	25	13	11	7	4.5	
Grand Rapids	707	127	162	29.25	30.00	.00	70.6	+ 0.6	92	15	81	48	26	60	29	62	57	66	3.28	+ 0.7	6	6,702	sw.	46	se.	23	11	4	16	6.0	
Lansing							68.2		90	17	80	44	26	56	33	61	58	75	1.76		9	3,675	s.	20	nw.	25	11	8	12	5.4	
Houghton	668	66	74	29.24	29.96	− .01	63.4	− 0.1	87	20	72	45	25	55	31				4.51	+ 1.6	15	4,811	w.	35	w.	22	10	13	8	5.2	
Marquette	734	77	116	29.20	30.00	+ .02	62.9	− 0.6	90	12	71	45	25	55	28	59	57	84	3.33	+ 0.5	12	7,117	w.	35	se.	22	5	17	9	6.3	
Port Huron	638	70	120	29.32	30.01	+ .01	67.8	+ 0.5	90	17	78	45	26	58	29	62	59	75	1.34	− 1.3	10	7,002	sw.	33	nw.	4	4	11	16	6.9	
Sault Sainte Marie	614	11	61	29.30	29.99	.00	61.8	+ 1.2	84	12	71	43	25	53	34	57	55	84	2.88	− 0.3	11	5,520	w.	45	nw.	25	7	8	16	6.7	
Chicago	823	140	310	29.13	30.00	.00	73.3	+ 2.1	89	22	80	53	26	67	23	65	61	69	3.08	+ 0.2	6	9,019	s.	60	ne.	23	10	15	6	5.0	
Milwaukee	681	122	139	29.28	30.01	+ .01	70.6	+ 2.1	89	24	79	51	26	62	26	63	59	73	2.75	− 0.1	12	6,789	w.	38	se.	23	11	11	9	4.9	
Green Bay	617	49	86	29.31	29.96	− .03	68.8	+ 1.8	92	22	78	46	26	59	29	61	58	73	6.08	+ 3.0	12	6,291	se.	38	w.	25	3	11	17	7.0	
Duluth	1,133	11	47	28.77	29.98	+ .01	62.8	− 2.1	85	20	71	44	31	54	29	56	52	73	2.41	− 1.1	10	8,800	ne.	38	sw.	13	10	11	10	5.2	
North Dakota.							**63.7**	**− 3.0**									**65**	**1.76**	**− 0.5**									**4.9**	
Moorhead	940	8	57	28.97	29.98	+ .02	65.4	− 0.5	92	11	79	36	31	52	45	57	52	70	1.39	− 1.7	6	5,570	nw.	35	se.	29	16	8	7	4.3	
Bismarck	1,674	8	57	28.23	29.99	+ .05	64.8	− 3.3	98	11	78	38	26	51	43	55	50	65	1.26	− 0.7	9	7,234	nw.	48	w.	29	13	10	8	4.8	
Devils Lake	1,482	11	44	28.40	29.95	+ .01	62.5	− 2.6	94	11	76	36	31	50	43	53	46	62	2.63	− 0.1	6	7,989	se.	42	w.	30	8	10	13	6.0	
Williston	1,872	14	56	28.01	29.96	+ .03	62.2	− 5.7	95	11	76	36	25	48	47	52	46	63	1.78	+ 0.5	8	6,859	nw.	50	w.	29	14	9	8	4.6	
Upper Miss. Valley.							**72.3**	**− 0.1**									**70**	**2.88**	**− 0.3**									**5.0**	
Minneapolis	918	102	208				69.0		90	20	79	48	26	59	28				1.56	− 2.1	8	7,571	s.	37	nw.	3	10	5	16	5.9	
St. Paul	837	171	179	29.07	29.96	− .01	69.1	− 0.4	90	20	79	47	26	59	32	60	55	67	0.98	− 2.5	10	3,402	s.	24	sw.	7	15	13	3	3.4	
La Crosse	714	11	48	29.20	29.96	− .02	70.6	+ 0.6	94	24	82	45	26	60	38				4.99	+ 1.6	13	3,056	s.	24	w.	7	11	8	12	5.5	
Madison	974	70	78	28.95	29.97	− .02	70.6	+ 1.0	91	24	80	50	26	61	27	62	57	68	6.56	+ 3.4	13	5,781	sw.	42	nw.	23	7	15	9	5.8	
Charles City	1,015	10	49	28.92	29.97	.00	69.8	− 0.9	94	24	81	43	26	58	38	62	59	73	5.84	+ 2.4	13	4,122	sw.	36	n.	20	7	9	15	6.5	
Davenport	606	71	79	29.33	29.98	.00	74.0	+ 1.0	94	2	84	50	26	64	28	64	59	65	4.31	+ 0.7	8	4,365	sw.	29	w.	25	14	10	7	4.5	
Des Moines	861	84	101	29.06	29.95	− .02	73.4	+ 0.4	97	22	84	45	26	63	31	64	59	66	2.40	− 1.2	9	4,755	s.	27	n.	3	9	10	12	5.6	
Dubuque	698	100	115	29.26	30.00	+ .02	72.8	+ 0.8	93	24	83	48	26	62	35	63	57	66	3.96	+ 0.9	10	4,065	s.	20	nw.	25	11	9	11	5.5	
Keokuk	614	64	78	29.33	29.99	+ .01	74.4	− 0.2	95	16	84	48	26	65	27	65	62	71	0.92	− 2.3	5	4,192	s.	32	nw.	25	14	15	2	3.6	
Cairo	356	87	93	29.63	30.00	+ .01	76.6	− 0.4	92	18	85	57	27	68	24	69	67	77	2.90	0.0	7	4,383	ne.	41	n.	23	14	11	6	4.1	
La Salle	536	56	64	29.45	30.01	+ .02	72.9	+ 0.9	92	22	84	48	26	62	32				3.74	+ 0.9	7	4,345	sw.	28	w.	25	11	11	9	5.0	
Peoria	609	11	45	29.35	30.02	+ .03	72.2	− 0.3	94	22	84	41	26	60	35	65	62	76	0.68	− 2.2	6	4,029	s.	26	e.	23	8	17	6	5.0	
Springfield, Ill.	644	10	91	29.32	29.99	.00	73.8	− 0.2	93	16	84	49	26	64	29	66	62	70	0.78	− 2.0	7	5,257	s.	32	sw.	21	8	14	9	5.3	
Hannibal	534	75	109	29.42	29.99	+ .01	73.3	− 1.7	94	22	83	47	27	63	29				1.64	− 1.7	8	4,750	sw.	28	nw.	25	9	12	10	5.2	
St. Louis	567	208	317	29.39	29.99	.00	75.2	− 2.0	93	22	83	54	26	67	22	67	64	70	1.90	− 0.8	7	5,988	se.	33	se.	23	13	11	7	4.6	
Missouri Valley.							**72.5**	**− 1.3**									**69**	**4.81**	**+ 1.4**									**4.5**	
Columbia, Mo.	784	11	84	29.16	29.97	.00	74.2	− 0.5	98	24	85	46	27	64	32				4.40	+ 1.4	8	4,202	s.	40	w.	25	19	5	7	3.4	
Kansas City	963	161	181	28.95	29.95	− .02	75.2	− 0.6	95	23	84	53	26	67	27	68	64	73	5.00	+ 0.2	11	7,341	s.	45	e.	8	11	13	7	4.6	
St. Joseph							75.0		98	22	85	46	26	65	31	66	63	72	2.00		9	4,518	se.	38	w.	24	12	11	8	5.0	
Springfield, Mo.	1,324	98	104	28.60	29.98	+ .01	74.4	− 0.4	92	22	83	51	27	66	25	68	65	78	4.65	+ 0.3	7	6,105	se.	33	n.	8	21	7	3	3.0	
Iola	984	11	50	28.95	29.96	.00	76.9	+ 0.6	98	22	88	46	27	66	35				3.55	+ 0.1	9	4,623	se.	37	ne.	8	11	15	5	4.5	
Topeka	983	85	101				74.6	− 1.4	95	21	84	50	27	66	29				8.00	+ 3.7	12	5,574	se.	45	nw.	8	15	10	6	3.9	
Lincoln	1,189	11	84	28.72	29.95	.00	73.5	− 0.4	96	22	83	53	26	64	32	65	60	72	14.21	+10.5	10	6,426	s.	42	ne.	16	7	10	14	6.1	
Omaha	1,105	115	121	28.81	29.96	.00	74.0	− 0.4	96	22	83	53	26	64	32	65	60	68	4.76	+ 1.1	12	5,095	s.	32	n.	25	12	9	10	5.0	
Valentine	2,598	47	54	27.31	29.99	+ .05	68.1	− 3.2	96	21	81	38	25	55	36	58	52	66	4.95	+ 2.1	11	6,794	sw.	44	nw.	2	11	19	1	4.1	
Sioux City	1,135	96	164	28.78	29.97	+ .02	70.2	− 2.4	93	1	80	44	26	60	32	63	59	71	2.76	− 0.2	9	7,246	s.	65	n.	2	12	10	9	4.9	
Pierre	1,572	70	75	28.32	29.96	+ .02	71.2	− 1.9	100	29	85	45	25	58	40	38	49	54	0.60	− 1.4	3	7,147	e.	48	nw.	29	11	14	6	4.7	
Huron	1,306	56	67	28.60	29.99	+ .05	68.0	− 1.1	95	1	82	38	26	54	42	59	54	70	1.43	− 1.2	9	7,578	s.	32	s.	27	11	15	5	4.6	
Yankton	1,233	49	57	28.67	29.96	+ .01	69.8	− 3.0	96	1	81	45	31	59	36				3.37	+ 0.2	9	4,655	ne.	34	se.	8	7	19	5	5.3	
Northern Slope.							**64.1**	**− 2.6**									**53**	**0.83**	**− 0.4**									**4.3**	
Havre	2,505	11	44	27.37	29.97	+ .06	63.2	− 3.7	93	20	78	27	25	49	45	53	46	61	0.37	− 0.9	3	5,189	nw.	30	nw.	15	15	10	6	3.9	
Miles City	2,371	26	48				69.3	− 2.2	106	20	85	34	25	54	46				1.27	+ 0.2	4	3,583	ne.	33	nw.	13					
Helena	4,110	8	56	25.84	29.98	+ .04	62.4	− 3.7	92	19	76	29	25	48	43	48	36	46	1.06	+ 0.4	6	4,667	sw.	36	sw.	10	15	11	5	3.3	
Kalispell	2,962	11	34	26.96	29.98	+ .05	59.1	− 3.8	86	19	74	30	25	44	41	47	38	53	0.67	− 0.2	3	2,938	w.	18	w.	22	10	15	6	4.7	
Rapid City	3,234	46	50	26.63	29.98	+ .05	67.0	− 1.8	93	20	80	39	25	54	44	54	45	51	0.59	− 1.5	4	5,154	w.	34	n.	27	10	16	5	4.7	
Cheyenne	6,088	56	64	24.11	29.96	+ .04	64.8	− 1.0	89	19	80	25	25	50	46	51	43	52	0.62	− 0.8	7	6,414	s.	40	nw.	29	7	20	4	5.0	
Lander	5,372	26	36	24.72	29.97	+ .05	64.2	− 1.5	91	19	83	23	25	46	59	49	36	47	0.36	− 0.2	3	2,808	w.	26	w.	27	13	17	1	3.8	
Sheridan	3,790	9	47	26.14	29.99		63.0		96	21	81	26	25	45	59	49	37	48	0.42		5	4,634	nw.	48	nw.	29	7	19	5	6.0	
Yellowstone Park	6,200	11	48	23.97	29.98	+ .05	57.3	− 3.6	84	19	74	23	25	41	47	44	32	47	0.52	− 0.5	5	5,468	sw.	42	sw.	7	19	11	1	2.6	T.
North Platte	2,821	11	51	27.12	30.00	+ .06	69.8	− 2.4	99	21	83	26	25	56	43	60	56	70	2.02	− 0.4	10	5,079	se.	35	ne.	10	12	12	7	4.3	
Middle Slope.							**74.3**	**− 0.4**									**66**	**3.67**	**+ 1.2**									**4.6**	
Denver	5,291	129	136	24.81	29.96	+ .04	70.6	+ 0.2	94	21	85	40	25	56	53	56	46	50	1.79	+ 0.4	9	6,055	s.	44	ne.	24	4	26	1	5.1	
Pueblo	4,685	80	86	25.37	29.97	+ .06	71.2	− 0.9	97	24	85	39	26	57	49	57	51	59	2.43	+ 0.9	11	4,880	se.	49	n.	24	12	17	2	4.4	
Concordia	1,398	42	50	28.52	29.97	+ .02	73.6	− 2.9	98	21	84	44	26	63	35	66	63	75	7.57	+ 4.8	12	4,155	s.	26	nw.	8	7	18	6	5.6	
Dodge City	2,509	11	51	27.40	29.94	+ .01	75.4	− 1.1	104	22	87	45	26	64	39	65	60	68	2.63	0.0	13	7,649	se.	45	nw.	24	10	17	4	4.4	
Wichita	1,358	98	121	28.57	29.97	+ .02	77.4	− 0.1	103	23	88	48	26	67	33	67	63	68	4.52	+ 1.4	9	6,000	se.	33	e.	8	7	20	4	5.1	
Oklahoma	1,214	10	47	28.68	29.92	− .02	80.8	+ 2.3	106	3	92	53	26	70	32	71	68	74	3.08	− 0.1	9	8,727	s.	52	s.	3	14	13	4	3.9	
Southern Slope.							**81.3**	**+ 2.7**									**59**	**1.84**	**− 0.4**									**3.9**	
Abilene	1,738	10	52	28.16	29.90	− .02	85.9	+ 4.7	105	2	97	64	27	75	31	68	60	50	2.87	+ 0.9	5	6,923	s.	26	e.	9	11	12	8	4.6	
Amarillo	3,676	10	49	26.30	29.94	+ .02	76.2	+ 1.6	99	28	98	49	26	64	36	64	59	65	2.19	− 0.6	10	7,691	s.	40	n.	25	18	13	0	3.8	
Del Rio	944	8	57	28.92	29.88	− .02	87.8	+ 3.8	102	22	99	70	26	76	27				0.26	− 2.4	1	6,146	se.	28	se.	18	24	7	0	1.9	
Roswell	3,578	9	57	26.38	29.93	+ .05	77.4	+ 0.8	99	2	91	52	26	64	36	64	59	63	2.03	+ 0.6	10	3,612	se.	52	nw.	13	9	15	7	5.3	
Southern Plateau.							**78.7**	**+ 1.4**									**45**	**1.19**	**− 0.3**									**3.6**	
El Paso	3,762	110	133	26.17	29.81	− .03	82.2	+ 3.6	101	2	93	65	26	71	29	63	52	42	1.18	− 0.5	11	7,971	ne.	47	ne.	13	16	15	0	3.6	
Santa Fe	7,013	8	56	23.38	29.90	+ .01	67.8	+ 0.8	85	21	80	48	26	56	31	55	48	57	1.91	− 0.4	11	5,525	ne.	34	sw.	29	5	25	1	4.5	
Flagstaff	6,907	8	57	23.48	29.91	+ .07	63.8	+ 1.0	85	7	78	44	17	50	39	53	48	69	3.74	+ 0.4	13	3,991	nw.	30	ne.	22	9	9	13	5.7	
Phoenix	1,108	50	56	28.67	29.78	− .01	89.6	+ 0.6	107	5	102	69	30	77	31	71	62	43	0.14	− 0.8	2	3,264	w.	33	nw.	3	11	17	3	4.2	
Yuma	141	9	58	29.63	29.77	+ .01	91.6	+ 1.5	113	26	107	64	14	76	43	73	64	47	0.18	− 0.2	2	4,811	sw.	33	s.	22	31	0	0	0.5	
Independence	3,910	11	42	25.97	29.86	+ .05	77.2	+ 0.8	99	6	94	52	30	60	39	56	37	27	0.00	− 0.1	0	4,322	nw.	25	sw.	25	20	9	2	3.3	
Middle Plateau.							**71.2**	**+ 0.4**									**38**	**0.54**	**− 0.1**									**2.9**	
Reno	4,532	56	63	25.49	29.90	+ .06	69.8	+ 2.8	96	22	89	41	30	51	45	48	29	28	0.00	− 0.2	0	5,114	w.	29	w.	7	31	0	0	0.5	
Tonopah	6,090	12	20	24.12	29.89		74.7		91	23	86	48	29	63	29	52	30	22	0.24	− 0.2	1	5,427	w.	33	e.	22	21	10	0	2.5	
Winnemucca	4,344	18	56	25.63	29.95	+ .07	67.7	− 3.1	95	19	89	37	25	46	56	50	38	42	0.00	− 0.2	0	3,691	sw.	21	sw.	26	31	0	0	0.5	
Modena	5,479	10	43	24.67	29.90	+ .04	70.7	+ 2.1	92	7	86	46	30	55	40	53	40	43	1.32	+ 0.9	5	7,825	sw.	42	n.	1	11	17	3	4.7	
Salt Lake City	4,360	147	189	25.63	29.90	− .01	74.6	− 0.9	94	20	87	49	30	62	35	55	39	32	0.33	− 0.4	4	5,484	se.	60	w.	27	19	8	4	3.0	
Durango	6,546	18	56	23.77	29.92	+ .02	67.3	+ 1.0	91	22	83	45	31	51	42	53	45	57	1.28	− 0.5	11	4,066	nw.	24	s.	19	6	22	3	5.1	
Grand Junction	4,608	43	51	25.40	29.92	+ .02	76.8	+ 0.7	97	7	90	50	30	64	37	57	45	39	0.60	− 0.4	6	3,959	e.	28	se.	16	12	18	1	3.9	
Northern Plateau.							**68.6**	**− 3.0**									**33**	**0.03**	**− 0.3**									**2.0**	
Boise	2,739	78	86	27.16	29.97	+ .04	68.8	− 3.8	99	19	85	43	25	53	43	50	29	28	0.00	− 0.2	0	3,589	nw.	20	nw.	28	31	0	0	0.4	
Lewiston	757	10	51	29.20	30.00	+ .05	70.0	− 3.5	100	19	86	42	25	54	47				0.03	− 0.3	1	4,835	e.	43	w.	22	18	11	2	2.6	
Pocatello	4,477	46	54	25.50	29.93	+ .01	68.6	− 1.9	92	20	84	28	25	53	52	50	33	30	0.11	− 0.4	2	6,224	se.	34	sw.	29	24	7	0	1.5	
Spokane	1,929	101	110	27.98	30.00	+ .05	65.2	− 2.7	95	19	79	37	25	52	42	50	36	39	0.15	− 0.3	2	4,225	sw.	26	sw.	21	16	9	6	3.6	
Walla Walla	1,000	71	79	28.96	30.01	+ .05	70.6	− 3.2	98	9	84	41	24	58	36	53	36	34	0.11	− 0.3	1	4,489	s.	31	n.	23	24	5	2	2.0	
N. Pac. Coast Reg.							**58.4**	**− 2.7**									**76**	**0.21**	**− 0.6**									**5.1**	
North Head	211	11	56	29.94	30.16	+ .13	54.8	− 3.1	74	24	58	47	17	52	22	52	51	89	0.45	− 0.1	8	10,093	nw.	42	nw.	8	2	6	23	8.0	
Port Crescent	259	8	53	29.89	30.17	+ .15	52.8	− 3.4	75	18	60	35	24	45	34				0.16	− 0.5	4	3,793	nw.	17	nw.	31	9	18	4	4.9	
Seattle	123	185	224	30.01	30.14	+ .14	60.2	− 2.9	82	19	68	47	24	53	26	56	52	79	0.17	− 0.3	4	4,987	n.	25	n.	23	6	14	11	5.9	

TABLE I.—*Climatological data for U. S. Weather Bureau stations, August, 1910*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.			Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
N. P. Coast Reg.—Con.																												
Tacoma	213	113	120	29.88	30.10	+ .08	60.4	− 2.6	86	19	69	45	24	52	33	54	49	69	0.12	− 0.6	2	3,903	n.	21	sw.	22	12	11	8	4.8	
Tatoosh Island	86	7	57	30.04	30.14	+ .14	52.9	− 2.4	62	24	56	47	17	50	14	51	50	93	0.42	− 1.7	10	8,183	s.	38	ne.	25	5	7	19	6.8	
Portland, Oreg.	153	68	106	29.94	30.10	+ .09	63.9	− 2.0	91	18	74	48	16	54	34	56	50	66	0.13	− 0.5	2	4,524	nw.	32	ne.	24	11	16	4	4.4	
Roseburg	510	9	57	29.52	30.07	+ .07	64.0	− 2.2	91	18	81	40	24	47	44	54	47	63	0.00	− 0.3	0	2,983	nw.	24	n.	15	29	2	0	0.8	
Mid. Pac. Coast Reg.							65.3	− 1.5										56	0.00	0.0									3.4	
Eureka	62	62	80	30.00	30.07	+ .07	53.4	− 2.8	65	24	58	46	15	49	19	50	48	85	0.00	− 0.1	0	4,387	nw.	37	nw.	15	6	8	17	6.7	
Mount Tamalpais	2,375	11	18	27.52	29.95	+ .02	70.4	.....	90	22	79	43	17	62	31	52	36	33	0.00	0.0	0	10,453	nw.	48	nw.	27	30	1	0	0.3	
Point Reyes Light	490	7	18	29.41	29.93	.....	52.6	.....	68	23	56	46	3	49	17	.....	.....	.....	0.00	.....	0	13,791	nw.	64	nw.	28	5	9	17	7.4	
Red Bluff	332	50	56	29.51	29.85	− .01	80.4	− 0.6	105	5	97	57	28	64	41	57	36	25	0.00	0.0	0	3,460	se.	27	nw.	28	31	0	0	0.0	
Sacramento	69	106	117	29.89	29.87	+ .02	72.0	− 0.1	102	23	90	49	21	54	47	59	49	53	0.00	0.0	0	5,796	s.	22	nw.	29	31	0	0	0.3	
San Francisco	155	200	204	29.79	29.96	+ .04	56.5	− 1.5	79	29	62	48	31	51	24	52	49	83	0.00	0.0	0	8,852	w.	32	sw.	6	13	14	4	3.9	
San Jose	141	12	110	29.78	29.94	.....	64.4	− 2.3	95	23	80	44	21	49	45	.....	.....	.....	0.00	0.0	0	4,251	nw.	22	se.	16	29	2	0	2.2	
Southeast Farallon	30	9	17	29.95	29.98	.....	52.6	.....	63	23	55	48	3	50	10	.....	.....	.....	0.00	0.0	0	11,379	nw.	48	nw.	13	6	9	16	6.4	
S. Pac. Coast Reg.							70.4	− 0.1										63	0.01	0.0									2.1	
Fresno	330	67	70	29.50	29.84	+ .02	81.6	+ 0.4	107	23	101	56	29	63	43	58	38	28	0.00	0.0	0	3,975	nw.	13	w.	11	29	2	0	0.4	
Los Angeles	338	150	191	29.56	29.92	+ .04	70.1	+ 1.5	90	23	81	55	13	60	29	60	56	72	T.	0.0	0	3,937	sw.	21	s.	25	25	6	0	2.4	
San Diego	87	94	102	29.83	29.92	+ .03	67.8	− 0.9	82	24	73	58	13	63	15	63	60	82	0.05	0.0	1	4,238	nw.	22	nw.	31	26	5	0	2.4	
San Luis Obispo	201	47	54	29.75	29.97	+ .03	62.2	− 1.3	88	23	75	43	29	50	40	54	49	70	0.00	0.0	0	2,924	nw.	18	nw.	28	23	8	0	3.2	
West Indies.																														
Grand Turk	11	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
San Juan	82	48	90	29.90	29.98	+ .01	80.5	.....	87	20	86	70	29	76	15	.....	.....	.....	9.63	+ 3.8	22	9,420	e.	34	se.	24	9	14	8	5.4	
Panama.																														
Christobal	17	5	60	29.84	29.86	.....	78.4	.....	86	31	82	72	20	74	13	76	75	90	14.93	− 0.3	25	5,342	nw.	25	w.	19	1	19	11	7.1	
Culebra	404	4	30	29.44	29.83	.....	78.8	.....	89	7	86	69	6	72	17	73	73	94	10.11	− 0.5	23	4,152	nw.	30	n.	8	0	6	25	8.1	
Ancon	92	6	69	29.75	29.84	.....	29.2	.....	91	15	87	69	21	72	19	75	74	92	12.00	+ 4.4	18	4,541	nw.	31	nc.	19	1	11	19	7.6	
Alhajuela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.43	+ 0.1	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.84	− 0.5	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gatun	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.85	− 2.2	28	.....	.....	.....	.....	.....	.....	.....	.....	.....

† Below sea level.

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.80 inch in 1 hour, during August, 1910, at all stations furnished with self-registering gages.*

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex	18	12:40 p. m.	1:20 p. m.	1.00	12:50 p. m.	1:18 p. m.	0.01	0.15	0.27	0.40	0.55	0.89	0.99	.....	.....	.....	.....	.....	.....	.....	.....
Do	19	11:12 a. m.	1:35 p. m.	1.62	11:18 a. m.	1:09 p. m.	0.01	0.29	0.41	0.44	0.46	0.49	0.55	0.73	0.87	1.22	1.45	1.47	.....	.....	.....
Albany, N. Y.	4	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.29	.....	.....	.....
Alpena, Mich	25	.....	.....	1.88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Amarillo, Tex	3	.....	.....	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....
Anniston, Ala	7	1:05 p. m.	3:30 p. m.	0.47	1:31 p. m.	1:41 p. m.	0.04	0.24	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Asheville, N. C	7	5:56 p. m.	8:05 p. m.	1.24	6:02 p. m.	6:30 p. m.	0.01	0.22	0.37	0.46	0.52	0.58	0.67	0.70	0.76	0.84	0.93	.....	.....	.....	.....
Do	30-31	12:12 p. m.	12:20 p. m.	5.59	4:42 a. m.	5:23 a. m.	3.74	0.10	0.14	0.25	0.35	0.49	0.73	1.08	1.31	.....	.....	.....	.....	.....	.....
Atlanta, Ga	4	.....	.....	0.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.28	.....	.....	.....
Atlantic City, N. J	19	7:48 a. m.	10:15 a. m.	1.02	8:32 a. m.	9:15 a. m.	0.03	0.14	0.47	0.51	0.54	0.56	0.59	0.68	0.75	0.82	.....	.....	.....	.....	.....
Augusta, Ga	12	11:30 a. m.	12:15 p. m.	0.95	11:32 a. m.	11:52 a. m.	0.01	0.17	0.59	0.80	0.87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	31	8:30 a. m.	1:00 p. m.	1.12	9:15 a. m.	9:45 a. m.	0.02	0.20	0.52	0.68	0.76	0.83	0.88	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore, Md	8	.....	.....	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.26	.....	.....	.....
Bentonville, Ark	6	§8:05 a. m.	11:55 a. m.	1.45	9:45 a. m.	10:15 a. m.	0.42	0.11	0.30	0.40	0.57	0.76	0.96	.....	.....	.....	.....	.....	.....	.....	.....
		¶7:10 p. m.	8:50 p. m.	1.36	7:13 p. m.	7:54 p. m.	0.01	0.34	0.48	0.52	0.74	0.91	1.03	1.08	1.17	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	10	.....	.....	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.16	.....	.....	.....
Birmingham, Ala	5	§1:23 p. m.	1:45 p. m.	0.50	1:23 p. m.	1:33 p. m.	0.00	0.21	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		¶3:00 p. m.	3:45 p. m.	0.58	3:00 p. m.	3:32 p. m.	0.00	0.15	0.22	0.31	0.36	0.42	0.54	0.57	.....	.....	.....	.....	.....	.....	.....
Do	6	10:54 a. m.	12:00 noon	0.63	11:08 a. m.	11:38 a. m.	0.01	0.14	0.22	0.39	0.47	0.52	0.60	.....	.....	.....	.....	.....	.....	.....	.....
Bismarck, N. Dak	14	.....	.....	0.63	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.23	.....	.....	.....
Block Island, R. I	15-16	2:45 p. m.	9:40 a. m.	1.43	10:23 p. m.	11:22 p. m.	0.29	0.07	0.14	0.21	0.25	0.32	0.43	0.46	0.50	0.52	0.59	0.96	.....	.....	.....
Boise, Idaho	‡	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boston, Mass	19	.....	.....	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.22	.....	.....	.....
Buffalo, N. Y	10	3:20 a. m.	4:30 a. m.	0.57	3:29 a. m.	3:49 a. m.	T.	0.14	0.39	0.51	0.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Vt	4	.....	.....	0.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.26	.....	.....	.....
Cairo, Ill	23	5:06 a. m.	8:35 a. m.	1.59	5:55 a. m.	6:40 a. m.	0.02	0.18	0.38	0.58	0.74	0.86	0.91	0.95	1.00	1.08	.....	.....	.....	.....	.....
Canton, N. Y	18	.....	.....	0.93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.28	.....	.....	.....
Charles City, Iowa	17	12:10 a. m.	5:00 a. m.	0.74	12:21 a. m.	12:40 a. m.	0.04	0.11	0.30	0.45	0.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	20	12:20 a. m.	2:15 a. m.	0.99	12:32 a. m.	12:50 a. m.	0.01	0.19	0.52	0.75	0.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C	29-30	D. N. a. m.	10:20 a. m.	5.85	1:45 a. m.	3:45 a. m.	2.30	0.14	0.42	0.46	0.47	0.48	0.52	0.61	0.68	0.77	0.90	0.96	1.22	1.69	2.09
Charlotte, N. C	1	11:46 a. m.	12:32 p. m.	1.01	11:50 a. m.	12:06 p. m.	0.01	0.30	0.74	0.93	0.98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	7	8:39 p. m.	D. N. p. m.	0.90	8:39 p. m.	8:56 p. m.	0.00	0.18	0.45	0.74	0.81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	30	3:46 p. m.	6:20 p. m.	1.23	5:39 p. m.	6:06 p. m.	0.23	0.12	0.26	0.57	0.82	0.90	0.98	.....	.....	.....	.....	.....	.....	.....	.....
Chattanooga, Tenn	31	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Cheyenne, Wyo	14	.....	.....	0.21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
Chicago, Ill	23	2:05 a. m.	5:15 a. m.	1.81	2:06 a. m.	2:51 a. m.	T.	0.32	0.71	1.02	1.15	1.23	1.34	1.46	1.55	1.60	.....	.....	.....	.....	.....
Cincinnati, Ohio	25	8:00 p. m.	8:45 p. m.	0.71	8:33 p. m.	8:52 p. m.	0.11	0.05	0.16	0.38	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleveland, Ohio	25	.....	.....	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.19	.....	.....	.....
Columbia, Mo	3	.....	.....	2.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....
Columbia, S. C	4	7:55 p. m.	9:20 p. m.	0.65	8:21 p. m.	8:33 p. m.	0.02	0.38	0.52	0.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	17	2:44 p. m.	3:38 p. m.	1.32	2:48 p. m.	3:17 p. m.	0.04	0.23	0.70	0.99	1.10	1.16	1.24	.....	.....	.....	.....	.....	.....	.....	.....
Columbus, Ohio	25-26	.....	.....	0.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.15	.....	.....	.....
Concord, N. H	19	.....	.....	0.71	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.34	.....	.....	.....
Concordia, Kans	8	4:53 p. m.	11:30 p. m.	2.84	§4:55 p. m.	5:53 p. m.	0.01	0.18	0.37	0.44	0.44	0.45	0.51	0.82	0.96	1.00	1.09	1.25	.....	.....	.....
					¶8:47 p. m.	9:08 p. m.	1.75	0.23	0.39	0.75	0.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	17	12:47 a. m.	2:29 a. m.	1.34	1:56 a. m.	2:27 a. m.	0.02	0.07	0.14	0.31	0.83	1.18	1.31	.....	.....	.....	.....	.....	.....	.....	.....
Corpus Christi, Tex	31	10:10 a. m.	11:15 a. m.	0.82	10:20 a. m.	10:38 a. m.	0.02	0.13	0.44	0.68	0.79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	17-18	11:25 p. m.	1:00 a. m.	1.10	11:31 p. m.	12:21 a. m.	0.02	0.16	0.24	0.33	0.45	0.60	0.72	0.79	0.87	0.92	0.98	.....	.....	.....	.....
Do	20	1:45 p. m.	5:35 p. m.	0.70	2:03 p. m.	2:28 p. m.	0.02	0.15	0.26	0.33	0.55	0.65	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	30	7:42 a. m.	11:30 a. m.	0.60	7:53 a. m.	8:08 a. m.	0.02	0.14	0.28	0.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Rio, Tex	25	.....	.....	0.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Denver, Colo	13	7:40 p. m.	11:45 p. m.	0.71	10:31 a. m.	10:51 p. m.	0.03	0.28	0.36	0.53	0.64	.....	.....	.....	.....	.....	.....	0.64	.....	.....	.....
Des Moines, Iowa	3	.....	.....	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.34	.....	.....	.....
Detroit, Mich	1	.....	.....	0.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Devils Lake, N. Dak	15	4:26 p. m.	5:15 p. m.	0.98	4:35 p. m.	5:02 p. m.	0.01	0.33	0.52	0.62	0.84	0.92	0.96	.....	.....	.....	.....	.....	.....	.....	.....
Do	29	5:15 p. m.	5:58 p. m.	1.30	5:32 p. m.	5:57 p. m.	0.02	0.05	0.30	0.72	1.03	1.28	.....	.....	.....	.....	.....	*	.....	.....	.....
Dodge City, Kans	17–18	.....	.....	0.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dubuque, Iowa	20	10:37 a. m.	12:42 p. m.	0.80	11:55 a. m.	12:40 p. m.	0.02	0.10	0.21	0.30	0.38	0.45	0.56	0.63	0.72	0.78	.....	.....	.....	.....	.....
Duluth, Minn	12	5:30 p. m.	6:15 p. m.	1.42	5:41 p. m.	6:03 p. m.	0.01	0.16	0.62	1.14	1.38	1.40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Durango, Colo	19	.....	.....	0.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
Eastport, Me	4	.....	.....	0.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.33	.....	.....	.....
Elkins, W. Va	21	6:30 p. m.	8:50 p. m.	1.57	6:40 p. m.	7:35 p. m.	0.01	0.19	0.45	0.79	0.86	0.89	0.94	1.04	1.18	1.27	1.34	1.40	.....	.....	.....
El Paso, Tex	3	.....	.....	0.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	.....	.....	.....
Erie, Pa	25	.....	.....	0.52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.32	.....	.....	.....
Escanaba, Mich	3	4:05 p. m.	4:40 p. m.	0.72	4:05 p. m.	4:27 p. m.	0.00	0.11	0.38	0.48	0.62	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	22	3:58 p. m.	6:40 p. m.	1.98	4:11 p. m.	5:37 p. m.	0.01	0.06	0.15	0.34	0.52	0.63	0.74	0.90	0.96	1.00	1.04	1.22	1.73	1.86	.....
Eureka, Cal	‡	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Evansville, Ind	7	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.24	.....	.....	.....
Flagstaff, Ariz	2	2:55 p. m.	4:20 p. m.	0.96	3:14 p. m.	3:59 p. m.	0.02	0.34	0.48	0.50	0.50	0.61	0.68	0.74	0.86	0.93	.....	.....	.....	.....	.....
Do	22	10:15 a. m.	11:10 a. m.	0.54	10:28 a. m.	10:44 a. m.	0.01	0.16	0.30	0.42	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Smith, Ark	15	3:57 a. m.	5:48 a. m.	1.15	4:04 a. m.	4:56 a. m.	0.01	0.09	0.27	0.40	0.52	0.74	0.86	0.89	0.91	0.99	1.09	1.14	.....	.....	.....
Fort Worth, Tex	11	.....	.....	0.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Fresno, Cal	‡	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex	19	.....	.....	1.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.61	.....	.....	.....
Grand Haven, Mich	8	5:45 p. m.	7:50 p. m.	0.44	6:51 p. m.	7:08 p. m.	0.02	0.17	0.29	0.35	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	22–23	11:40 p. m.	D. N. a. m.	1.92	12:15 a. m.	1:15 a. m.	0.10	.....	0.18	0.20	0.33	0.40	0.46	0.52	0.59	0.75	0.86	.....	.....	.....	.....
Grand Junction, Colo	11	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.32	.....	.....	.....
Grand Rapids, Mich	22–23	10:35 p. m.	4:48 a. m.	2.84	{10:44 p. m.	11:30 p. m.	0.01	0.14	0.24	0.30	0.33	0.36	0.40	0.48	0.57	0.65	0.69	.....	.....	.....	.....
					{12:12 a. m.	1:04 a. m.	0.95	0.16	0.24	0.30	0.41	0.46	0.51	0.54	0.62	0.82	1.00	1.11	.....	.....	.....
Green Bay, Wis	22	9:10 p. m.	11:45 p. m.	2.31	{ 9:18 p. m.	9:54 p. m.	0.01	0.14	0.15	0.26	0.32	0.50	0.76	0.90	.....	.....	.....	.....	.....	.....	.....
					{10:49 p. m.	11:26 p. m.	1.08	0.08	0.14	0.37	0.66	0.91	1.03	1.23	.....	.....	.....	.....	.....	.....	.....
Do	24–25	8:55 p. m.	D. N. a. m.	1.73	12 midn't.	1:30 a. m.	0.13	0.24	0.60	0.81	1.09	1.44	1.49	.....	.....	.....	.....	.....	.....	.....	.....
Hannibal, Mo	20–21	9:40 p. m.	D. N. a. m.	0.54	12:22 a. m.	12:40 a. m.	0.03	0.08	0.32	0.39	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrisburg, Pa	10	6:32 p. m.	8:05 p. m.	0.55	6:35 p. m.	6:50 p. m.	0.01	0.11	0.30	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hartford, Conn	4	7:36 p. m.	8:20 p. m.	0.68	7:42 p. m.	8:02 p. m.	0.03	0.18	0.43	0.55	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hatteras, N. C	15	3:50 a. m.	11:55 a. m.	1.04	3:54 a. m.	4:17 a. m.	0.01	0.28	0.33	0.33	0.39	0.48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	27–28	10:50 a. m.	11:55 a. m.	5.21	{10:51 a. m.	11:17 a. m.	0.01	0.12	0.25	0.37	0.55	0.64	0.67	.....	.....	.....	.....	.....	.....	.....	.....
					{10:45 p. m.	11:15 p. m.	2.05	0.17	0.33	0.64	0.76	0.83	1.04	1.17	1.23	1.26	.....	.....	.....	.....	.....
Havre, Mont	6	.....	.....	0.23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.20	.....	.....	.....
Helena, Mont	29	.....	.....	0.91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
Houghton, Mich	2–3	10:30 p. m.	5:00 a. m.	0.69	11:29 p. m.	11:39 p. m.	0.02	0.28	0.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huron, S. Dak	15	.....	.....	0.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
Independence, Cal	‡	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indianapolis, Ind	18	7:21 a. m.	12:15 p. m.	1.18	11:28 a. m.	11:48 a. m.	0.43	0.08	0.42	0.69	0.73	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	25	4:00 p. m.	7:45 p. m.	1.10	4:19 p. m.	4:44 p. m.	0.09	0.12	0.43	0.63	0.75	0.80	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iola, Kans	17	9:15 a. m.	12:30 p. m.	1.22	9:29 a. m.	9:49 a. m.	T.	0.26	0.59	0.74	0.79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jacksonville, Fla	20	12:45 p. m.	7:40 p. m.	1.12	12:56 p. m.	1:23 p. m.	0.01	0.07	0.22	0.42	0.55	0.66	0.71	.....	.....	.....	.....	.....	.....	.....	.....
Do	30	2:10 p. m.	3:10 p. m.	0.64	2:30 p. m.	2:43 p. m.	0.01	0.15	0.45	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jupiter, Fla	15	10:22 a. m.	3:07 p. m.	2.09	10:51 p. m.	11:51 a. m.	0.05	0.08	0.20	0.36	0.43	0.66	0.85	0.88	1.06	1.24	1.33	1.48	.....	.....	.....
Do	24	2:35 a. m.	5:40 a. m.	0.99	2:41 a. m.	3:01 a. m.	0.02	0.20	0.48	0.64	0.74	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	27	11:22 a. m.	8:05 p. m.	4.91	{11:55 a. m.	12:45 p. m.	0.22	0.19	0.49	0.63	0.74	0.80	0.81	0.82	0.82	0.83	0.92	.....	.....	.....	.....
					{12:45 p. m.	1:35 p. m.	.....	1.03	1.19	1.31	1.42	1.79	2.23	2.64	2.98	3.30	3.59	.....	.....	.....	.....
					{ 1:35 p. m.	2:00 p. m.	.....	3.75	3.89	4.09	4.20	4.29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kalispell, Mont	31	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
Kansas City, Mo	2	5:45 a. m.	8:50 a. m.	2.22	6:08 a. m.	7:08 a. m.	0.01	0.19	0.29	0.32	0.39	0.52	0.76	1.03	1.48	1.67	1.80	1.98	.....	.....	.....
Keokuk, Iowa	20	.....	.....	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Key West, Fla	3–4	11:10 p. m.	12:25 a. m.	0.68	11:39 p. m.	12:06 a. m.	0.02	0.16	0.35	0.52	0.63	0.65	0.66	.....	.....	.....	.....	.....	.....	.....	.....
Do	20	10:15 p. m.	11:00 p. m.	0.66	10:23 p. m.	10:51 p. m.	0.01	0.15	0.27	0.46	0.58	0.63	0.65	.....	.....	.....	.....	.....	.....	.....	.....
Knoxville, Tenn	6	5:45 p. m.	7:08 p. m.	0.90	5:51 p. m.	6:50 p. m.	0.01	0.05	0.07	0.11	0.23	0.41	0.65	0.73	0.73	0.82	0.82	0.84	0.89	.....	.....
La Crosse, Wis	8	{12:56 p. m.	2:23 p. m.	0.83	1:46 p. m.	2:23 p. m.	0.10	0.08	0.24	0.37	0.46	0.58	0.64	0.68	0.73	.....	.....	.....	.....	.....	.....
		{ 5:59 p. m.	7:10 p. m.	1.05	6:20 p. m.	7:00 p. m.	0.08	0.06	0.17	0.43	0.54	0.66	0.87	0.92	0.97	.....	.....	.....	.....	.....	.....
Lander, Wyo	12	.....	.....	0.33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.22	.....	.....	.....
La Salle, Ill	15–16	6:55 p. m.	3:30 a. m.	3.30	8:49 p. m.	9:49 p. m.	0.58	0.07	0.13	0.17	0.30	0.41	0.49	0.54	0.59	0.63	0.67	1.00	.....	.....	.....
Lewiston, Idaho	31	.....	.....	0.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.03	.....	.....	.....
Lexington, Ky	21	4:15 a. m.	5:45 a. m.	0.91	4:36 a. m.	5:01 a. m.	0.04	0.13	0.26	0.49	0.75	0.81	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lincoln, Nebr	2	11:00 p. m.	11:59 p. m.	0.87	11:06 p. m.	11:26 p. m.	0.01	0.28	0.52	0.75	0.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	16–17	7:45 p. m.	6:15 a. m.	3.28	{7:54 p. m.	8:44 p. m.	0.05	0.18	0.31	0.36	0.38	0.53	0.81	0.99	1.15	1.29	1.38	.....	.....	.....	.....
					{2:08 a. m.	2:36 a. m.	1.81	0.21	0.37	0.46	0.54	0.74	0.82	.....	.....	.....	.....	.....	.....	.....	.....
Do	28–29	8:20 p. m.	6:20 a. m.	8.38	9:28 p. m.	11:14 p. m.	T.	0.12	0.31	0.47	0.61	0.78	0.99	1.27	1.50	1.65	1.72	1.91	2.39	2.77	2.87
					1:03 a. m.	1:53 a. m.	3.29	0.05	0.06	0.09	0.12	0.26	0.48	0.56	0.61	0.69	0.83	.....	.....	.....	.....
					1:53 a. m.	2:43 a. m.	.....	0.92	1.11	1.29	1.46	1.69	1.92	2.08	2.14	2.19	2.34	.....	.....	.....	.....
					2:43 a. m.	3:33 a. m.	.....	2.49	2.66	2.75	2.82	2.88	2.98	3.06	3.13	3.18	3.24	.....	.....	.....	.....
					3:33 a. m.	4:23 a. m.	.....	3.28	3.34	3.43	3.49	3.57	3.66	3.72	3.81	3.89	4.00	.....	.....	.....	.....
					4:23 a. m.	5:13 a. m.	.....	4.04	4.06	4.06	4.12	4.22	4.28	4.29	4.31	4.47	4.50	.....	.....	.....	.....
					5:13 a. m.	6:03 a. m.	.....	4.60	4.68	4.77	4.81	4.84	4.87	4.90	4.96	5.02	5.08	.....	.....	.....	.....
Little Rock, Ark	25	4.55 p. m.	8:06 p. m.	1.32	5:03 p. m.	5:28 p. m.	0.01	0.22	0.59	0.81	0.97	1.19	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles, Cal	23	.....	.....	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....
Louisville, Ky	21	{9:10 a. m.	11:15 a. m.	0.65	9:47 a. m.	10:01 a. m.	0.05	0.22	0.34	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		{1:15 p. m.	3:30 p. m.	0.67	1:28 p. m.	1:43 p. m.	0.01	0.27	0.54	0.63	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Lynchburg, Va	10	.....	.....	0.36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macon, Ga	10	3:28 p. m.	4:02 p. m.	0.38	3:52 p. m.	4:00 p. m.	0.01	0.22	0.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison, Wis	22–23	11:30 p. m.	4:15 a. m.	3.15	{12:06 a. m.	1:16 a. m.	0.20	0.05	0.23	0.42	0.51	0.61	0.66	0.71	0.74	0.78	0.89	1.13	1.27	.....	.....
					{ 1:48 a. m.	3:05 a. m.	1.51	0.08	0.16	0.18	0.18	0.19	0.21	0.37	0.57	0.69	0.85	1.20	1.64	.....	.....
Do	25	3:50 a. m.	7:35 a. m.	1.55	4:19 a. m.	4:52 a. m.	0.07	0.05	0.22	0.42	0.59	0.83	0.91	0.96	.....	.....	.....	.....	.....	.....	.....
Marquette, Mich	24	.....	.....	0.99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.34	.....	.....	.....
Memphis, Tenn	4	D. N. a. m.	D. N. a. m.	0.55	1:27 p. m.	1:50 a. m.	0.01	0.16	0.31	0.40	0.49	0.53	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meridian, Miss	4	3:23 p. m.	7:05 p. m.	1.65	3:23 p. m.	4:05 p. m.	0.00	0.10	0.32	0.52	0.67	0.88	1.11	1.25	1.43	1.48	.....	.....	.....	.....	.....
Milwaukee, Wis	23	.....	.....	0.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.52	.....	.....	.....
Minneapolis, Minn	29–30	10:50 p. m.	D. N. a. m.	0.60	1:27 a. m.	1:37 a. m.	0.14	0.19	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala	7	8:58 a. m.	9:20 a. m.	0.29	8:58 a. m.	9:03 a. m.	0.00	0.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	12	11:48 a. m.	12:50 p. m.	1.69	11:52 a. m.	12:30 p. m.	0.01	0.10	0.44	0.57	0.82	0.99	1.20	1.54	1.66	.....	.....	.....	.....	.....	.....
Modena, Utah	11	.....	.....	0.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	.....	.....	.....	.....	.....	.....
Montgomery, Ala	6–7	8:20 p. m.	D. N. a. m.	0.62	9:49 p. m.	10:10 p. m.	0.10	0.13	0.16	0.33	0.47	0.48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moorhead, Minn	19	2:28 p. m.	3:28 p. m.	1.10	2:30 p. m.	3:25 p. m.	T.	0.05	0.09	0.15	0.19	0.30	0.45	0.70	0.89	1.05	1.09	1.10	.....	.....	.....
Mount Tamalpais, Cal	‡	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mount Weather, Va	15	.....	.....	0.52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.37	.....	.....	.....
Nantucket, Mass	4–5	7:40 p. m.	12:50 a. m.	0.59	11:18 p. m.	11:30 p. m.	0.12	0.17	0.37	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	15–16	12:50 p. m.	11:20 a. m.	1.39	11:01 p. m.	11:31 p. m.	0.25	0.10	0.24	0.33	0.36	0.42	0.54	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	9	3:55 p. m.	5:35 p. m.	0.81	4:19 p. m.	4:34 p. m.	0.09	0.32	0.52	0.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Haven, Conn	9	.....	.....	0.93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.46	.....	.....	.....
New Orleans, La	5	2:22 p. m.	3:25 p. m.	1.86	2:28 p. m.	3:13 p. m.	0.01	0.06	0.20	0.58	0.89	1.25	1.51	1.62	1.78	1.84	.....	.....	.....	.....	.....
Do	11	12:27 p. m.	1:15 p. m.	0.68	12:28 p. m.	12:48 p. m.	0.01	0.18	0.47	0.59	0.65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	25–26	2:30 p. m.	D. N. a. m.	2.43	{2:37 p. m.	3:17 p. m.	0.01	0.07	0.22	0.47	0.58	0.67	0.92	1.11	1.16	.....	.....	.....	.....	.....	.....
					{5:14 p. m.	5:59 p. m.	.....	0.05	0.14	0.25	0.32	0.36	0.48	0.57	0.66	0.73	.....	.....	.....	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
New York, N. Y	9	5:50 a. m.	7:32 a. m.	0.73	5:55 a. m.	6:20 a. m.	T.	0.13	0.33	0.54	0.63	0.68									
Norfolk, Va	4	2:15 p. m.	3:50 p. m.	0.75	2:24 p. m.	2:39 p. m.	0.01	0.19	0.48	0.63											
Do	15	§10:30 a. m.	12:20 p. m.	0.62	11:25 a. m.	11:43 a. m.	0.09	0.13	0.23	0.38	0.45										
		‖ 4:10 p. m.	4:50 p. m.	0.42	4:27 p. m.	4:39 p. m.	0.06	0.19	0.30	0.34											
Northfield, Vt	4	8:15 a. m.	10:25 a. m.	0.58	9:00 a. m.	9:15 a. m.	0.04	0.12	0.35	0.45											
Do	19	D. N. a. m.	D. N. a. m.	0.38	3:26 a. m.	3:32 a. m.	0.10	0.11	0.16												
North Head, Wash	15			0.13																	
North Platte, Nebr	12			0.57														0.05			
Oklahoma, Okla	18			1.76														0.21			
Omaha, Nebr	13	4:10 p. m.	6:15 p. m.	0.83	4:20 p. m.	4:38 p. m.	0.02	0.31	0.53	0.60	0.63							*			
Do	28–29	5:00 p. m.	6:10 a. m.	2.40	5:00 a. m.	5:12 p. m.	0.00	0.27	0.43	0.47											
Oswego, N. Y	31			1.56																	
Palestine, Tex	25	4:35 p. m.	5:39 p. m.	0.76	4:38 p. m.	5:08 p. m.	0.01	0.10	0.25	0.33	0.47	0.67	0.73					0.66			
Parkersburg, W. Va	10			0.48																	
Pensacola, Fla	8	12:35 p. m.	1:05 p. m.	0.45	12:38 p. m.	12:46 p. m.	0.01	0.25	0.38									0.34			
Do	12	10:00 a. m.	2:50 p. m.	2.23	§10:05 a. m.	10:55 a. m.	0.01	0.13	0.19	0.32	0.45	0.46	0.46	0.49	0.63	0.73	0.78				
					§10:55 a. m.	11:43 a. m.		0.95	1.15	1.21	1.31	1.35	1.53	1.78	1.88	2.01	2.05				
Do	24	11:05 p. m.	11:45 p. m.	0.46	11:24 p. m.	11:33 p. m.	0.01	0.33	0.44												
Peoria, Ill	17	1:38 p. m.	2:12 p. m.	0.47	1:43 p. m.	1:53 p. m.	0.01	0.35	0.45												
Philadelphia, Pa	4	9:25 p. m.	10:15 p. m.	0.66	9:29 p. m.	9:54 p. m.	0.01	0.23	0.46	0.52	0.58	0.63									
Do	15	D. N. a. m.	7:30 a. m.	1.00	5:24 a. m.	6:23 a. m.	0.15	0.06	0.18	0.30	0.39	0.42	0.51	0.54	0.58	0.62	0.65	0.75			
Do	19	D. N. a. m.	7:45 a. m.	1.72	6:01 a. m.	7:10 a. m.	0.14	0.12	0.39	0.64	0.65	0.77	0.96	0.99	1.00	1.15	1.26	1.37	1.55		
Phoenix, Ariz	29			0.09																	
Pierre, S. Dak	6	8:44 p. m.	10:10 p. m.	0.52	8:15 p. m.	9:06 p. m.	0.03	0.18	0.26	0.38								0.09			
Pittsburg, Pa	14			0.92																	
Pocatello, Idaho	10			0.10														0.92			
Point Reyes Light, Cal	‡																	0.10			
Port Huron, Mich	31			0.50																	
Portland, Me	2	11:38 a. m.	12:18 p. m.	0.44	12:06 p. m.	12:18 p. m.	0.01	0.13	0.39	0.43	0.44							0.31			
Portland, Oreg	28			0.08																	
Providence, R. I	2	7:51 p. m.	8:54 p. m.	0.63	8:17 p. m.	8:37 p. m.	0.02	0.06	0.13	0.37	0.56							0.06			
Pueblo, Colo	4	3:24 p. m.	7:45 p. m.	0.66	3:36 p. m.	3:49 p. m.	0.01	0.06	0.28	0.38											
Do	13	12:35 a. m.	1:30 a. m.	0.62	12:45 a. m.	12:57 a. m.	0.01	0.19	0.53	0.55											
Raleigh, N. C	8	4:08 p. m.	4:23 p. m.	0.57	4:10 p. m.	4:18 p. m.	0.01	0.45	0.56												
Do	10	3:17 p. m.	6:10 p. m.	1.00	3:52 p. m.	4:16 p. m.	0.05	0.09	0.36	0.50	0.71	0.83									
Do	15	1:07 p. m.	4:25 p. m.	1.44	1:55 p. m.	2:50 p. m.	0.10	0.15	0.37	0.47	0.54	0.59	0.68	0.74	0.82	0.99	1.08	1.18			
Do	30	7:05 a. m.	6:05 p. m.	1.83	3:13 p. m.	3:55 p. m.	0.43	0.09	0.14	0.17	0.32	0.59	0.91	1.05	1.13	1.18					
Rapid City, S. Dak	7–8			0.46																	
Red Bluff, Cal	‡																	0.33			
Reno, Nev	‡																				
Richmond, Va	26			0.62																	
Rochester, N. Y	3			0.76														0.34			
Roseburg, Oreg	‡																	0.43			
Roswell, N. Mex	17–18			1.01																	
Sacramento, Cal	‡																	0.38			
St. Louis, Mo	7			0.70																	
St. Paul, Minn	16			0.15														0.41			
Salt Lake City, Utah	27			0.10														0.12			
San Antonio, Tex	17			0.12														0.10			
San Diego, Cal	30			0.05														0.12			
Sandusky, Ohio	31			1.32														0.05			
San Francisco, Cal	‡																	0.58			
San Jose, Cal	‡																				
San Luis Obispo, Cal	‡																				
Santa Fe, N. Mex	11			0.82																	
Sault Sainte Marie, Mich	21	5:40 p. m.	6:25 p. m.	0.85	5:40 p. m.	6:15 p. m.	0.00	0.17	0.33	0.50	0.58	0.60	0.67	0.82				0.45			
Savannah, Ga	18	5:40 a. m.	5:57 a. m.	0.48	5:43 a. m.	5:55 a. m.	0.01	0.23	0.43												
Do	29	9:55 a. m.	10:10 p. m.	8.04	3:17 p. m.	4:23 p. m.	1.42	0.09	0.17	0.28	0.45	0.53	0.59	0.64	0.69	0.72	0.74	1.03	1.26		
					5:35 p. m.	6:25 p. m.	2.79	0.08	0.18	0.31	0.39	0.44	0.48	0.50	0.61	0.79	0.95				
					6:25 p. m.	7:15 p. m.		1.03	1.08	1.13	1.24	1.44	1.53	1.65	1.71	1.75	1.83				
					7:15 p. m.	8:05 p. m.		1.86	1.95	2.08	2.19	2.40	2.51	2.78	2.99	3.13	3.31				
					8:05 p. m.	9:20 p. m.		3.54	3.64	3.69	3.85	4.15	4.32	4.48	4.51	4.55	4.61				
Scranton, Pa	10			0.94																	
Seattle, Wash	31			0.06														0.40			
Sheridan, Wyo	24			0.29														0.06			
Shreveport, La	10	4:55 p. m.	6:15 p. m.	0.70	4:58 p. m.	5:35 p. m.	0.01	0.08	0.12	0.18	0.29	0.43	0.53	0.61	0.66			0.07			
Do	11	9:45 a. m.	3:00 p. m.	0.58	10:09 a. m.	10:22 a. m.	0.02	0.07	0.26	0.40											
Sioux City, Iowa	14–15	11:45 p. m.	8:36 a. m.	1.25	2:28 a. m.	2:33 a. m.	0.18	0.26													
Southeast Farallon, Cal	‡																				
Spokane, Wash	31			0.14																	
Springfield, Ill	21			0.25														0.11			
Springfield, Mo	8–9	9:50 p. m.	7:50 a. m.	1.83	5:10 a. m.	5:35 a. m.	1.07	0.06	0.14	0.24	0.38	0.45						0.16			
Do	15	6:20 a. m.	7:15 a. m.	0.60	6:39 a. m.	6:54 a. m.	0.06	0.22	0.40	0.53											
Syracuse, N. Y	10			0.91																	
Tacoma, Wash	28			0.11														0.54			
Tampa, Fla	1	10:04 a. m.	6:05 p. m.	2.06	§10:06 a. m.	10:36 a. m.	0.02	0.16	0.38	0.49	0.56	0.64	0.70					0.05			
					§10:57 a. m.	11:17 a. m.	0.89	0.09	0.30	0.43	0.49										
Tatoosh Island, Wash	28			0.10																	
Taylor, Tex	29			0.04														0.05			
Thomasville, Ga	20	1:45 p. m.	5:50 p. m.	1.25	1:49 p. m.	2:16 p. m.	0.01	0.26	0.61	0.81	0.99	1.06	1.08					0.04			
Do	23	3:42 p. m.	8:02 p. m.	1.08	4:26 p. m.	5:12 p. m.	0.04	0.13	0.26	0.31	0.37	0.49	0.57	0.58							
Toledo, Ohio	18	7:27 a. m.	10:20 a. m.	1.14	8:05 a. m.	8:35 a. m.	0.21	0.13	0.23	0.38	0.46	0.57	0.67								
Tonopah, Nev	30			0.24																	
Topeka, Kans	2	4:15 a. m.	7:25 a. m.	1.91	4:54 a. m.	5:34 a. m.	0.03	0.10	0.30	0.78	1.00	1.30	1.44	1.55	1.65			*			
Do	17	5:30 a. m.	10:15 a. m.	2.17	5:44 a. m.	6:33 a. m.	0.03	0.12	0.28	0.41	0.55	0.63	0.64	0.73	0.92	1.18	1.27				
Valentine, Nebr	7			1.77														*			
Vicksburg, Miss	4	4:35 p. m.	5:25 p. m.	0.50	4:44 p. m.	5:04 p. m.	0.04	0.12	0.25	0.36	0.42										
Walla Walla, Wash	31			0.11														0.05			
Washington, D. C	16–17			0.48														0.25			
Wichita, Kans	31	4:20 a. m.	8:45 a. m.	2.52	§4:34 a. m.	5:01 a. m.	0.01	0.17	0.21	0.32	0.51	0.59	0.61								
					§5:48 a. m.	6:51 a. m.	0.74	0.06	0.18	0.34	0.45	0.63	0.91	1.10	1.26	1.33	1.47	1.57	1.62		
Williston, N. Dak	5			0.36														0.36			
Wilmington, N. C	11	1:30 p. m.	3:55 p. m.	1.00	3:12 p. m.	3:28 p. m.	0.59	0.11	0.29	0.38											
Do	14–15	10:25 p. m.	D. N. a. m.	1.04	12:34 a. m.	1:37 a. m.	0.09	0.08	0.13	0.18	0.20	0.21	0.21	0.21	0.26	0.40	0.63	0.96			
Do	19	6:12 p. m.	9:50 p. m.	0.78	6:21 p. m.	6:39 p. m.	0.04	0.22	0.44	0.52	0.58										
Do	24	10:22 a. m.	12:25 p. m.	0.74	10:29 a. m.	11:10 a. m.	0.02	0.20	0.30	0.31	0.40	0.50	0.55	0.60	0.65						
Do	30	8:50 a. m.	6:45 p. m.	2.90	10:42 a. m.	11:49 a. m.	0.47	0.16	0.29	0.33	0.42	0.49	0.56	0.71	0.88	0.99	1.14	1.46	1.72		
Winnemucca, Nev	‡																				
Wytheville, Va	3	7:27 p. m.	9:10 p. m.	1.07	7:37 p. m.	8:08 p. m.	0.01	0.17	0.41	0.55	0.76	0.90	0.98								
Yankton, S. Dak	14–15	11:05 p. m.	6:05 a. m.	1.81	12:31 a. m.	1:11 a. m.	0.36	0.10	0.25	0.36	0.49	0.69	0.89	1.11	1.17						
Yellowstone Park, Wyo	7			0.19														0.19			

‡August 30. ‡No date on which a measurable amount occurred.

TABLE III.—*Data furnished by the Canadian Meteorological Service, August, 1910.*

Stations.	Pressure.			Temperature.				Precipitation.		
	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Mean minimum.	Total.	Departure from normal.	Total snowfall.
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
St. Johns, N. F.										
Sydney, C. B. I.	29.96	30.00	+.05	64.1	+ 0.8	73.2	55.0	3.04	−0.58	
Halifax, N. S.	29.97	30.07	+.11	64.2	+ 0.6	74.3	54.1	2.69	−1.66	
Grand Manan, N. B.	29.99	30.04	+.09	62.7	+ 1.2	69.5	55.8	1.23	−2.43	
Yarmouth, N. S.	30.01	30.08	+.11	60.5	+ 0.3	68.8	52.3	1.69	−2.32	
Charlottetown, P. E. I.	29.99	30.03	+.09	65.5	+ 1.2	74.0	57.0	0.94	−2.80	
Chatham, N. B.	30.01	30.03	+.10	64.5	+ 1.3	74.9	54.0	3.11	−0.93	
Father Point, Que.	29.93	29.95	+.04	58.0	+ 2.4	66.8	49.2	2.65	−0.40	
Quebec, Que.	29.68	30.00	+.07	63.3	+ 0.2	72.1	54.6	3.55	−0.28	
Montreal, Que.	29.79	29.99	+.04	66.6	+ 0.2	73.7	59.5	5.89	+2.32	
Stonecliffe, Ont *	29.36	29.96	.00	62.4	− 0.8	72.3	52.6	3.21	+0.26	
Ottawa, Ont.	29.74	30.06	+.10	66.2	+ 1.4	75.2	57.2	4.39	+1.36	
Kingston, Ont.	29.71	30.01	+.03	66.6	− 0.4	74.4	58.8	3.95	+1.57	
Toronto, Ont.	29.63	29.99	.00	67.8	+ 1.8	77.5	58.0	3.05	+0.29	
White River, Ont.	28.63	29.93	−.03	57.4	+ 1.0	69.0	45.9	5.02	+1.72	
Port Stanley, Ont.	29.37	30.00	.00	66.7	+ 0.8	75.6	57.8	1.17	−1.25	
Southampton, Ont.	29.34			66.0	+ 2.2	74.6	57.3	2.68	+0.43	
Parry Sound, Ont.	29.32	30.00	+.02	66.1	+ 2.6	75.6	56.5	4.60	+1.88	
Port Arthur, Ont.	29.25	29.96	.00	60.2	+ 0.7	70.4	50.1	1.47	−1.28	
Winnipeg, Man.	29.14	29.96	+.02	62.2	− 1.2	75.5	49.0	2.14	−0.53	
Minnedosa, Man.	28.14	29.93	−.01	58.6	− 0.8	72.6	44.7	1.73	−0.37	
Qu' Appelle, Assin.	27.71	29.94	+.01	57.5	− 4.0	68.9	46.1	2.85	+1.21	
Medicine Hat, Alberta.	27.73	29.98	+.06	62.0	− 3.7	74.1	49.9	2.24	+0.57	
Swift Current, Sask.	27.45	30.01	+.08	57.6	− 6.4	69.2	46.1	2.28	+0.37	
Calgary, Alberta.	26.47	29.97	+.08	55.2	− 4.2	67.7	42.4	3.97	+1.83	T.
Banff, Alberta	25.46	30.01	+.10	51.8	− 4.5	65.2	38.5	2.97	+0.44	T.
Edmonton, Alberta.	27.72	29.99	+.07	56.7	− 2.1	69.5	43.9	2.87	+0.74	T.
Prince Albert, Sask.	28.39	29.93	+.01	56.8	− 2.1	68.1	45.6	0.69	−1.46	
Battleford, Sask.	28.24	29.96	+.05	58.8	− 3.8	72.0	45.7	1.08	−1.28	
Kamloops, B. C.	28.70	29.95	+.04	64.4	− 4.2	76.6	52.2	1.60	+0.51	
Victoria, B. C.	30.01	30.10	+.09	59.1	+ 0.4	68.5	49.8	0.36	−0.14	
Barkerville, B. C.	25.76	30.06	+.16	49.4	− 6.9	59.2	39.6	3.35	+0.25	0.8
Dawson, Yukon	28.94			51.1		63.4	38.5	1.67		
Hamilton, Bermuda	30.05	30.10	.00	80.5	+ 3.1	86.0	75.0	0.64	−5.44	

* Name changed from Rockliffe.

Climatological Districts of the United States.

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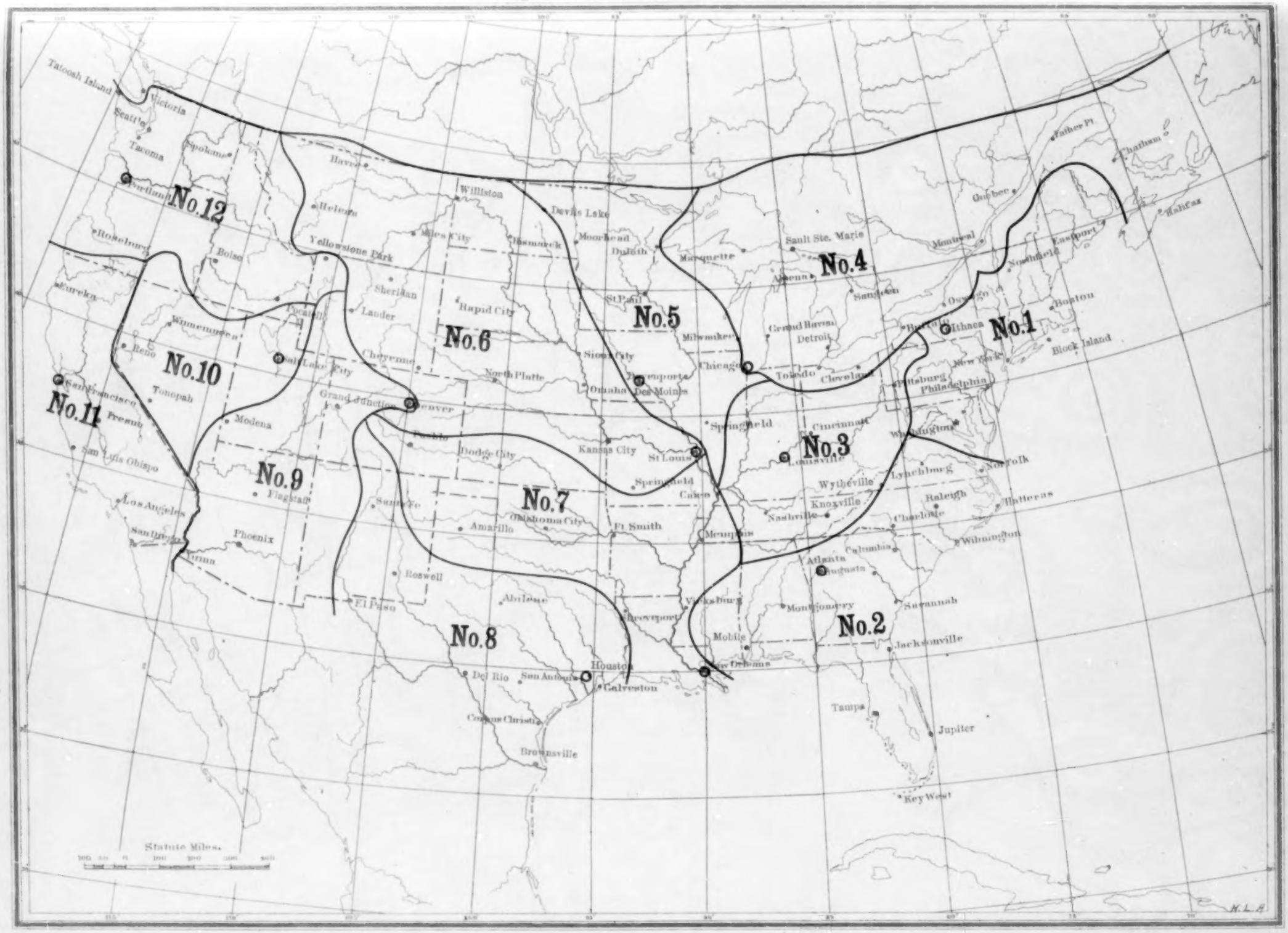
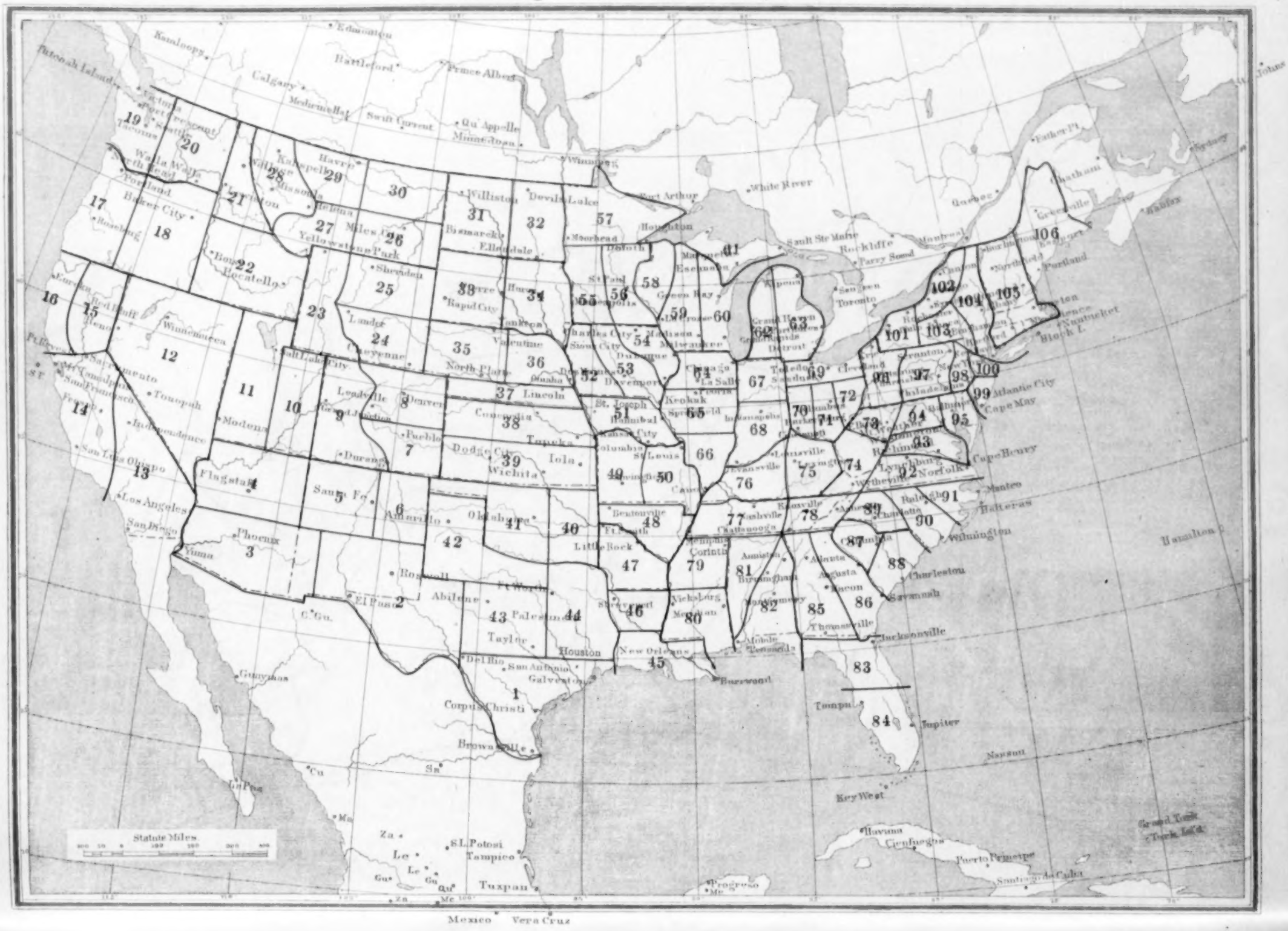
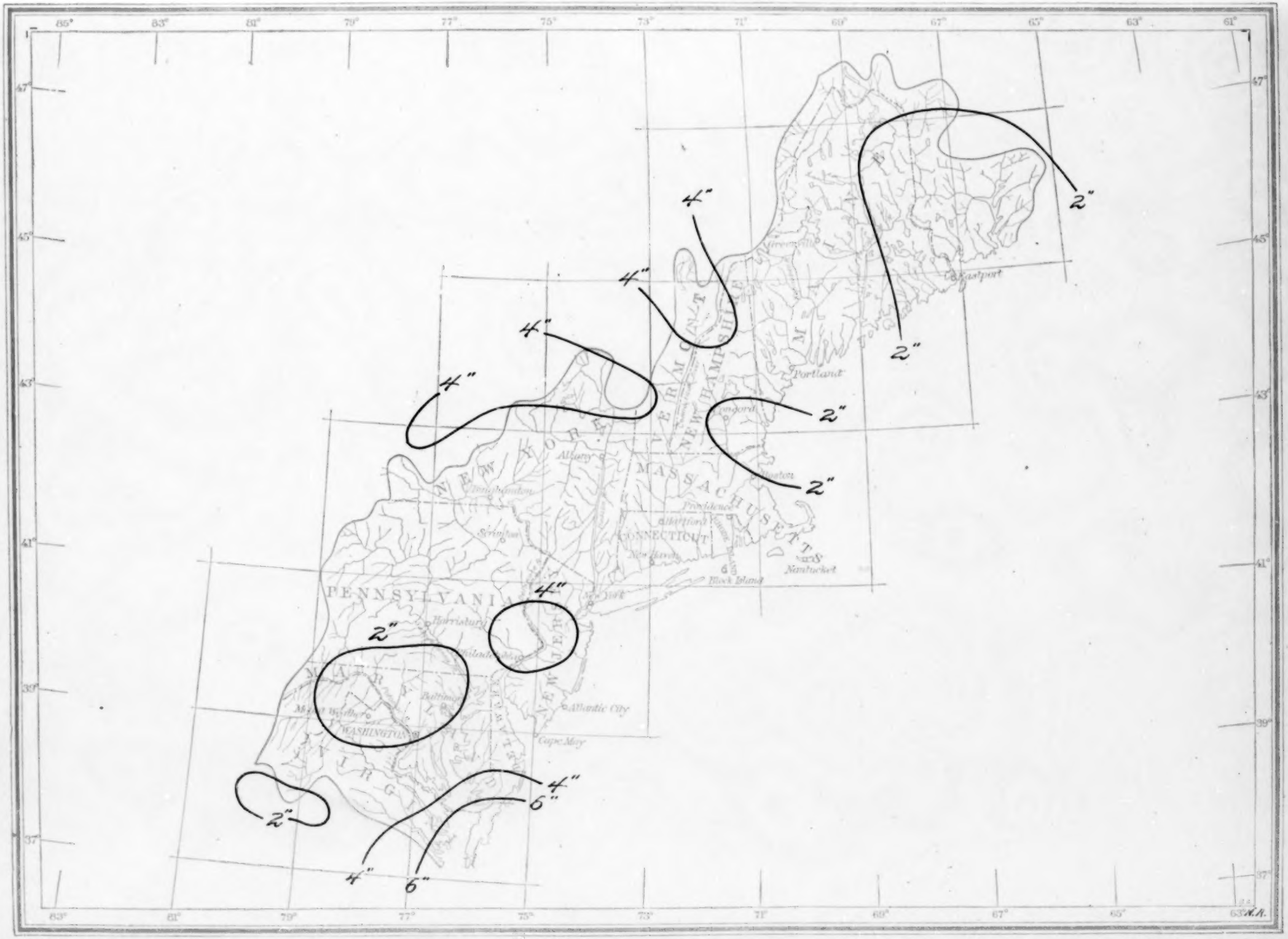




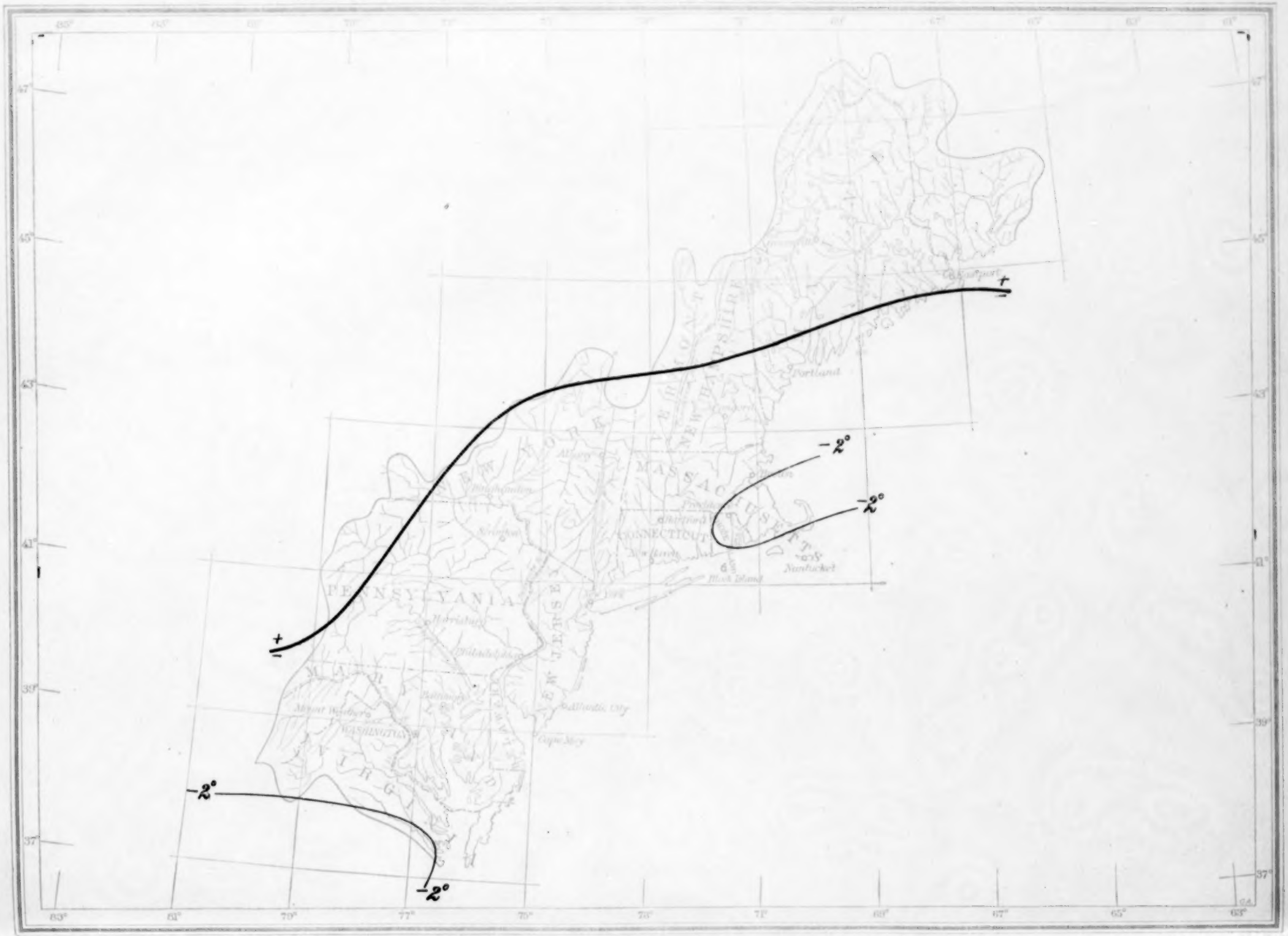
District No. 1.—Total Precipitation, August, 1910.

Mexico Vera Cruz

District No. 1.—Total Precipitation, August, 1910.



District No. 1.—Departure of the Mean Temperature from the Normal, August, 1910.



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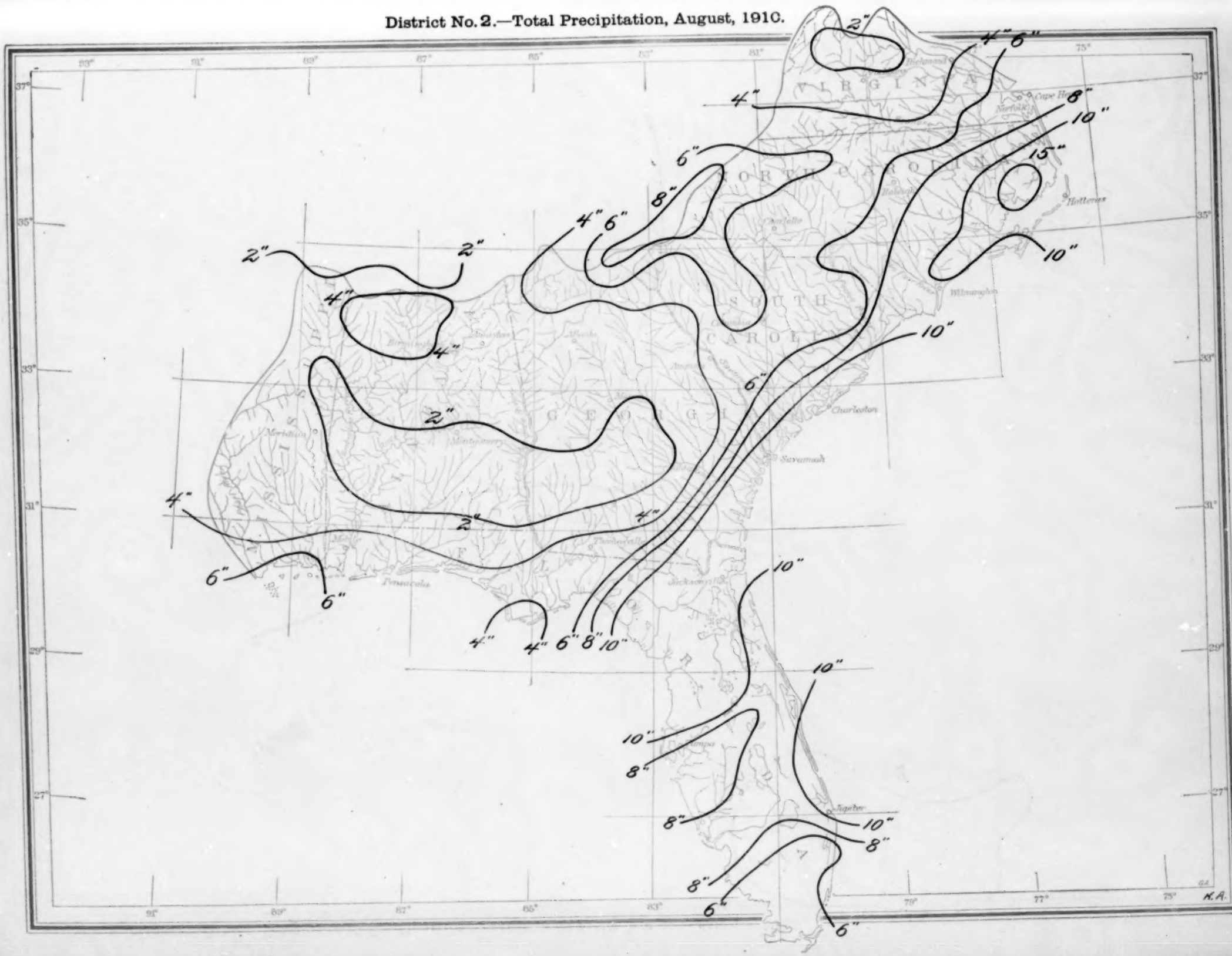

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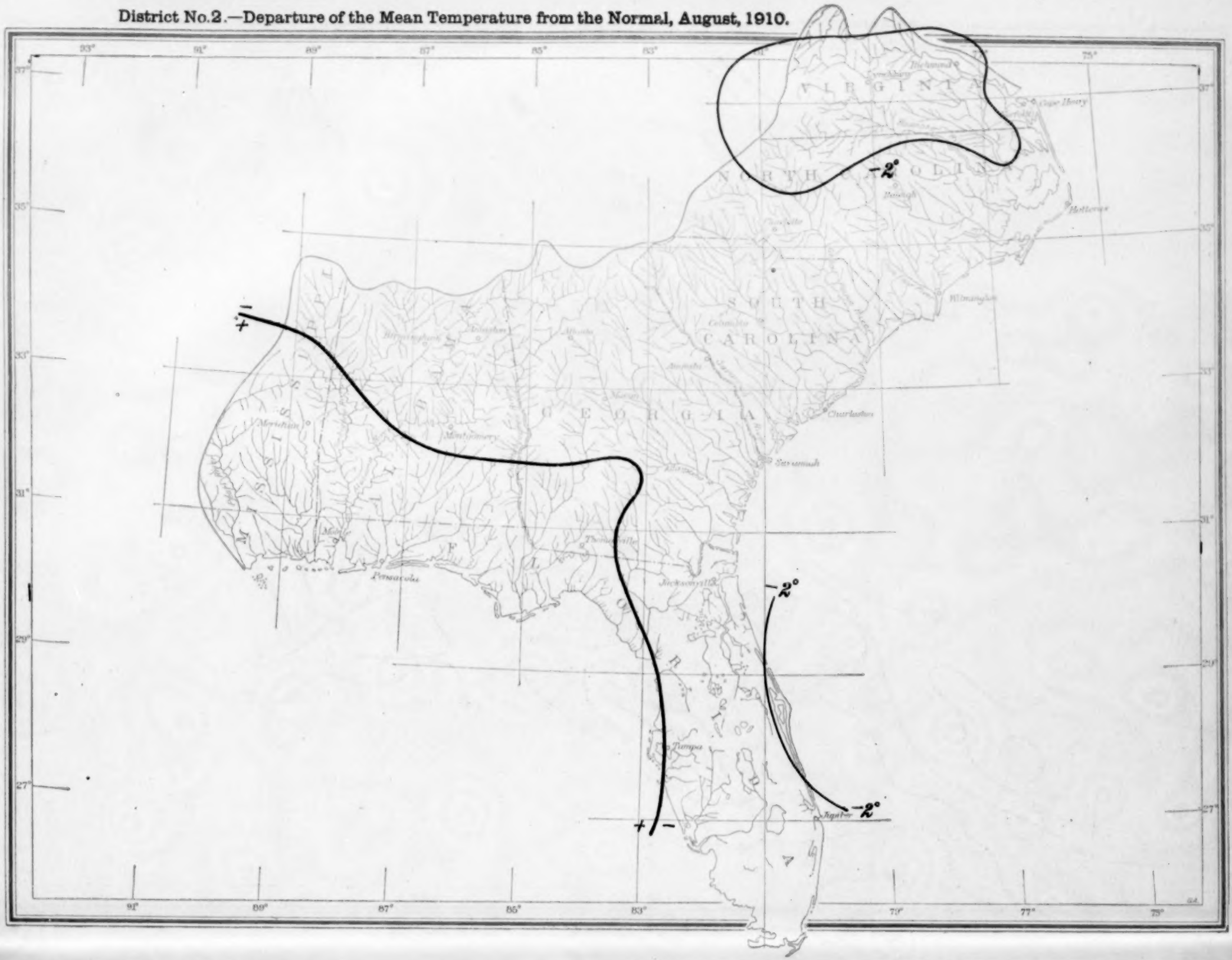
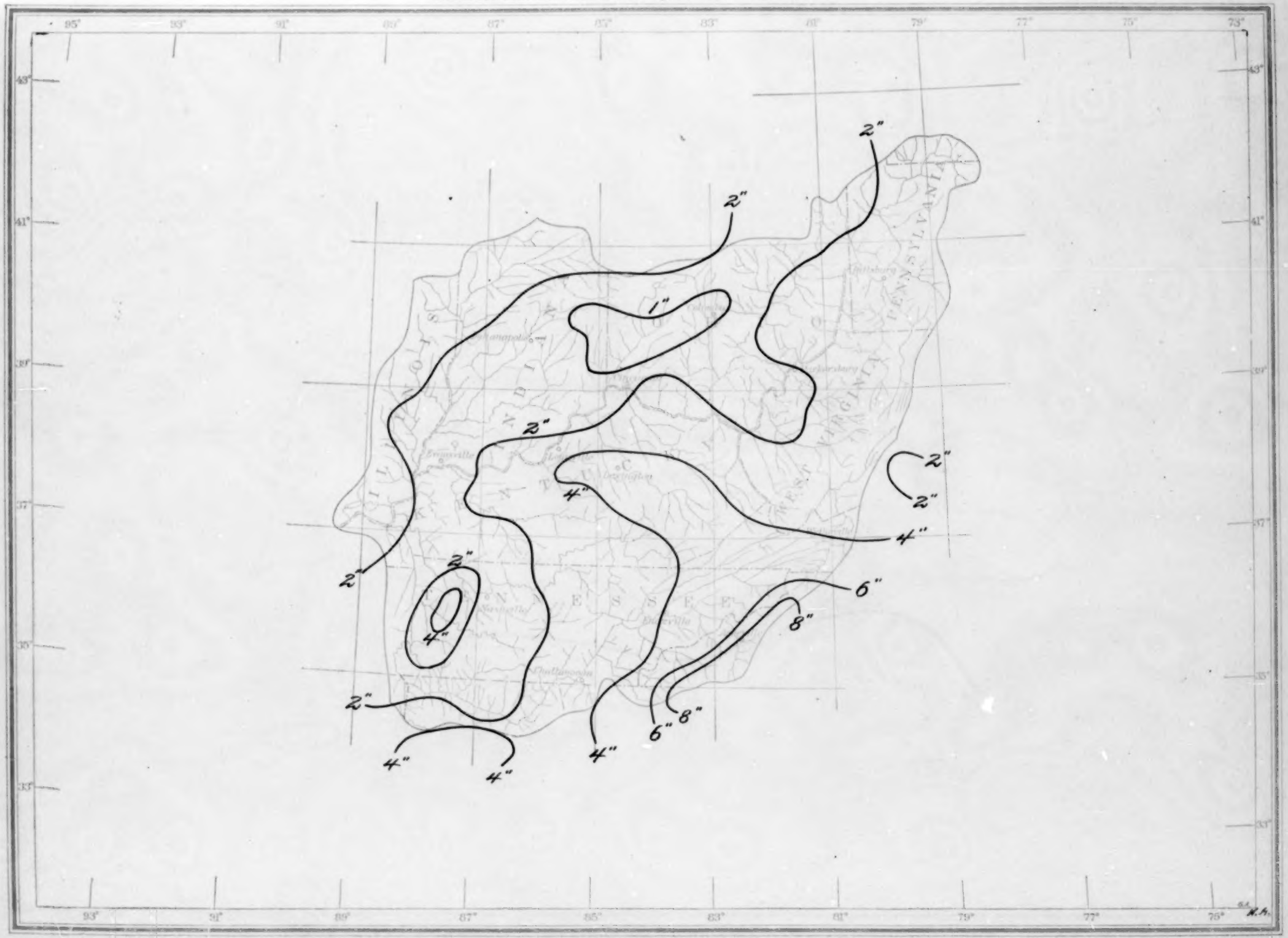


District No. 3.—Total Precipitation, August, 1910.

District No. 3.—Total Precipitation, August, 1910.



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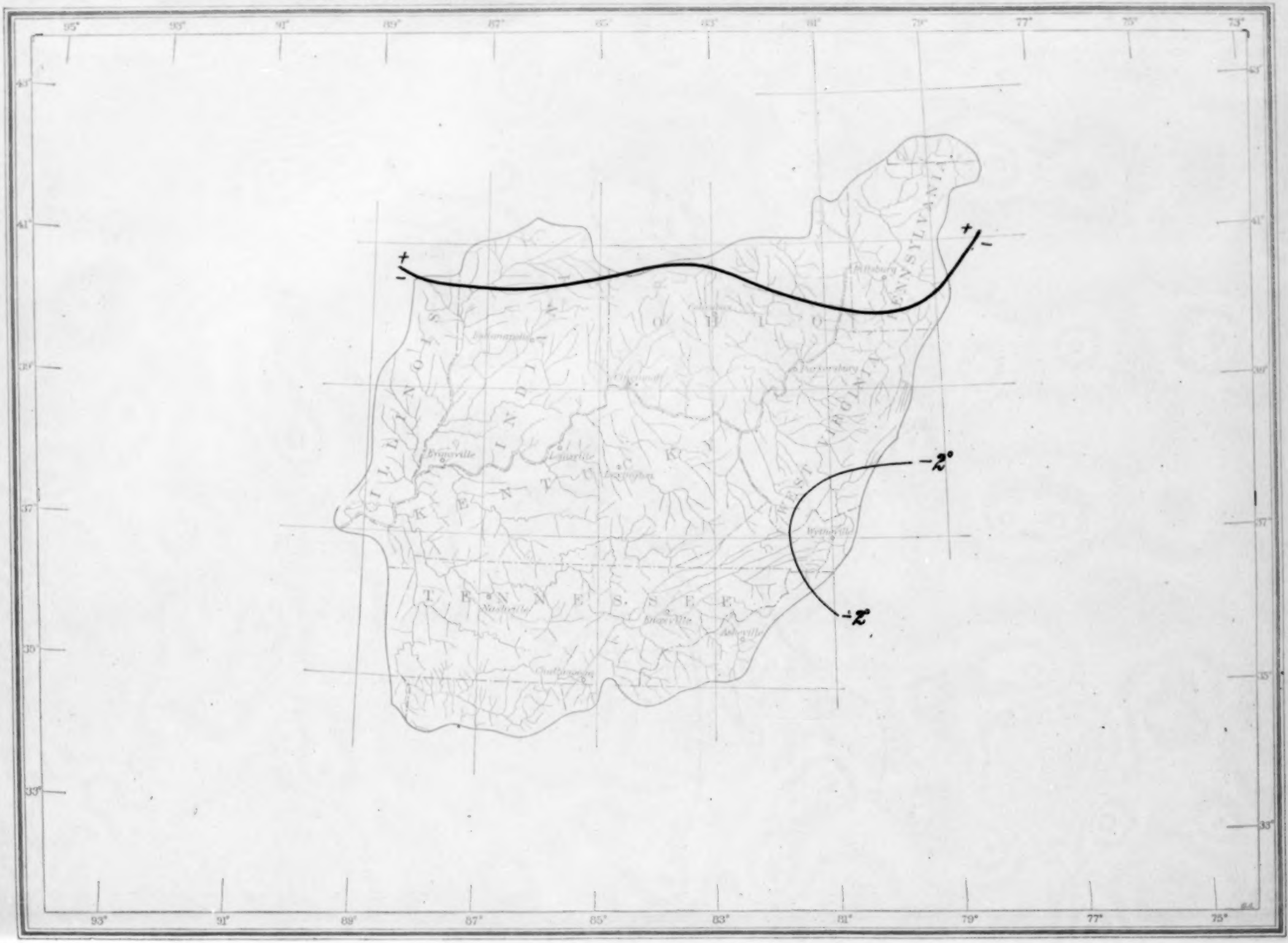

District No. 4.—Total Precipitation, August, 1910.

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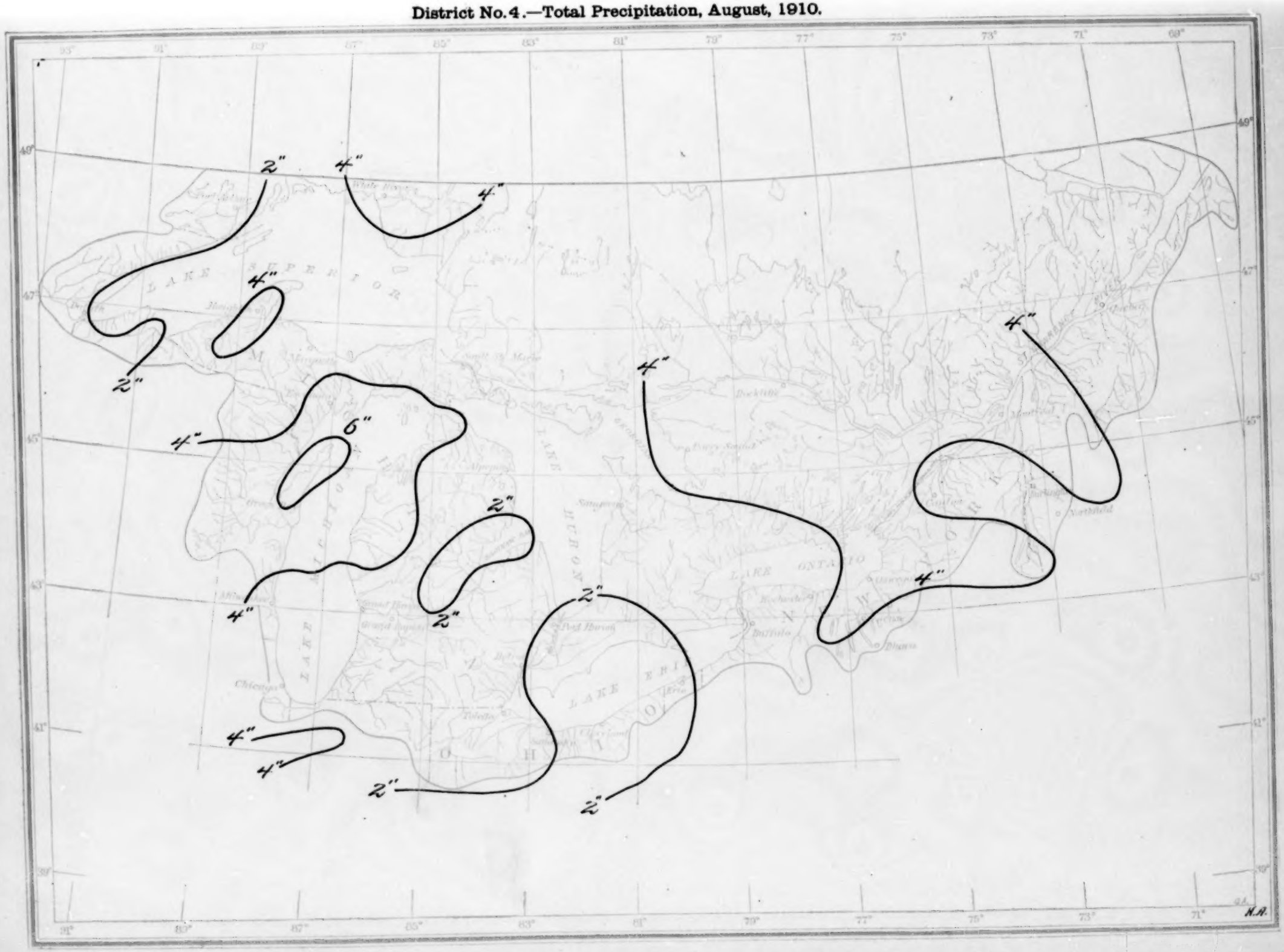
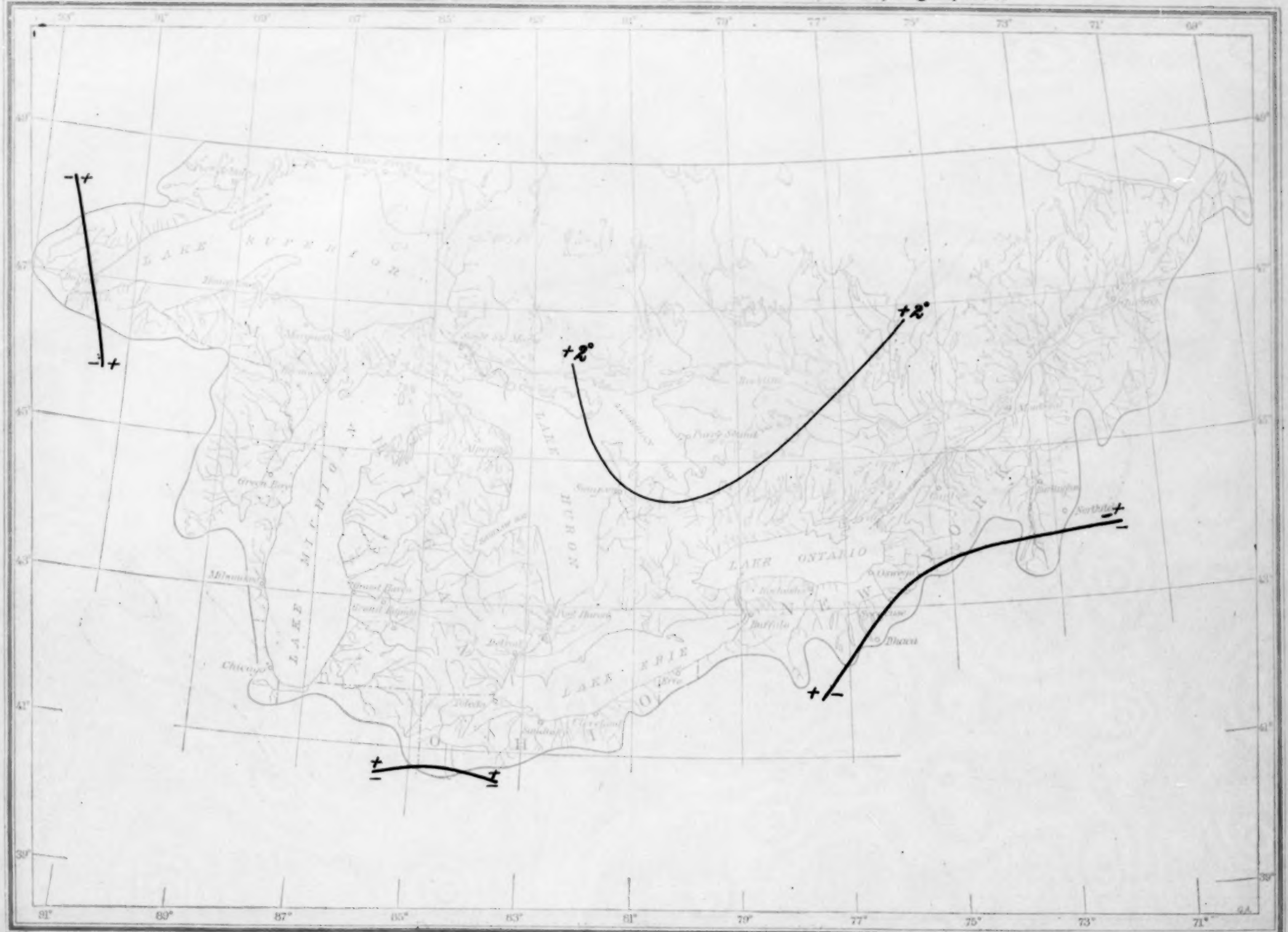


District No 4.—Departure of the Mean Temperature from the Normal, August, 1910.



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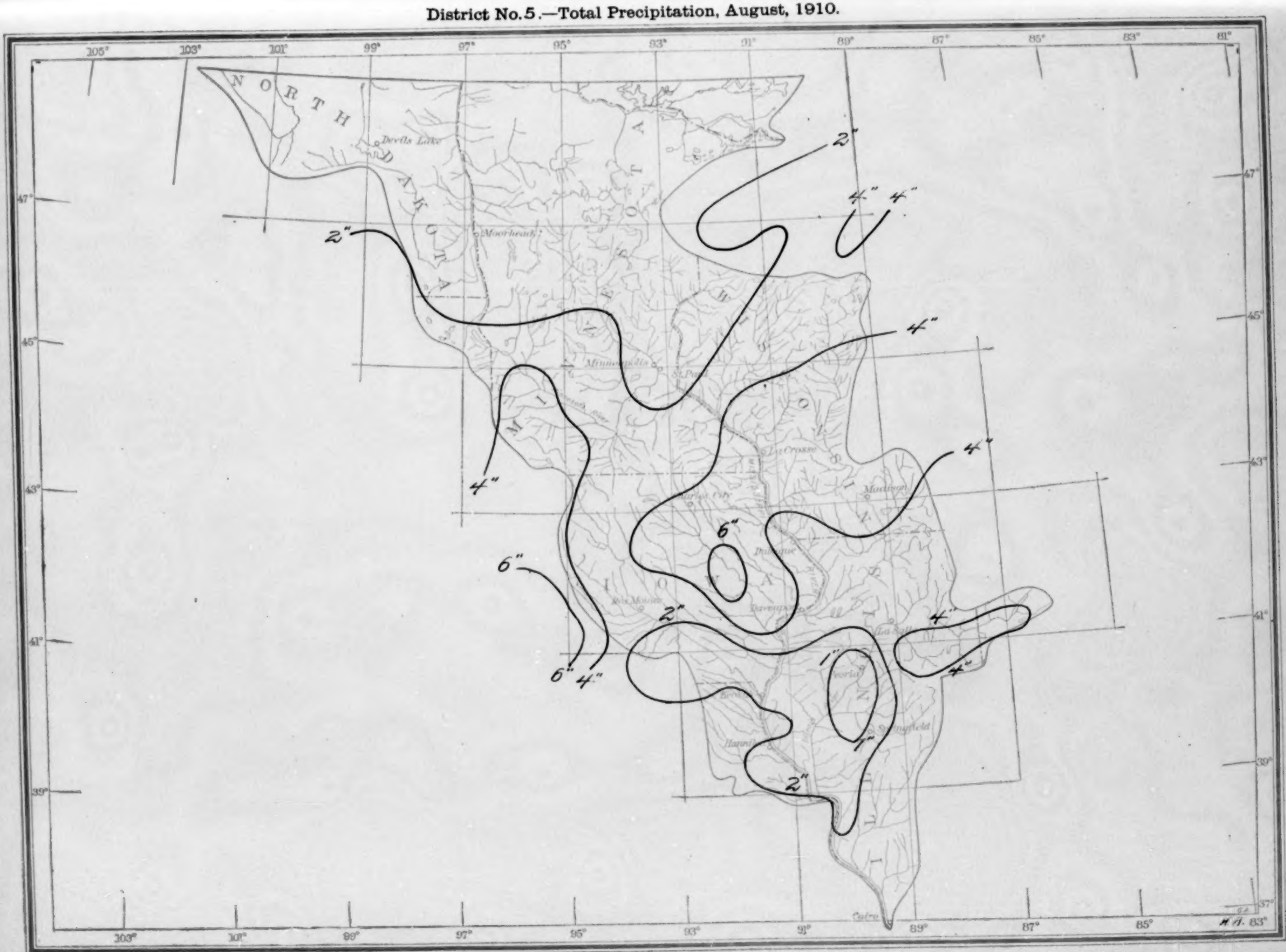

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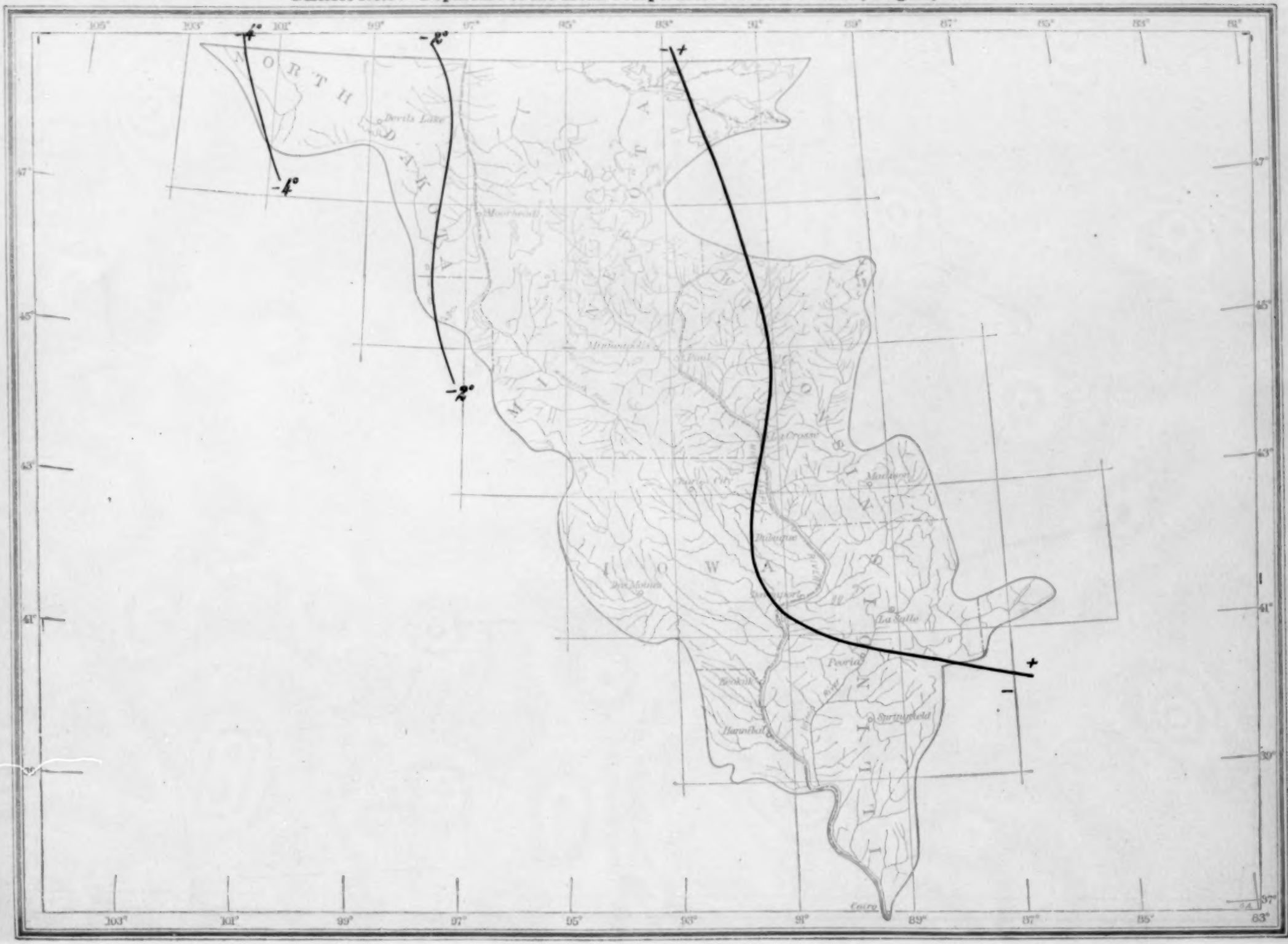

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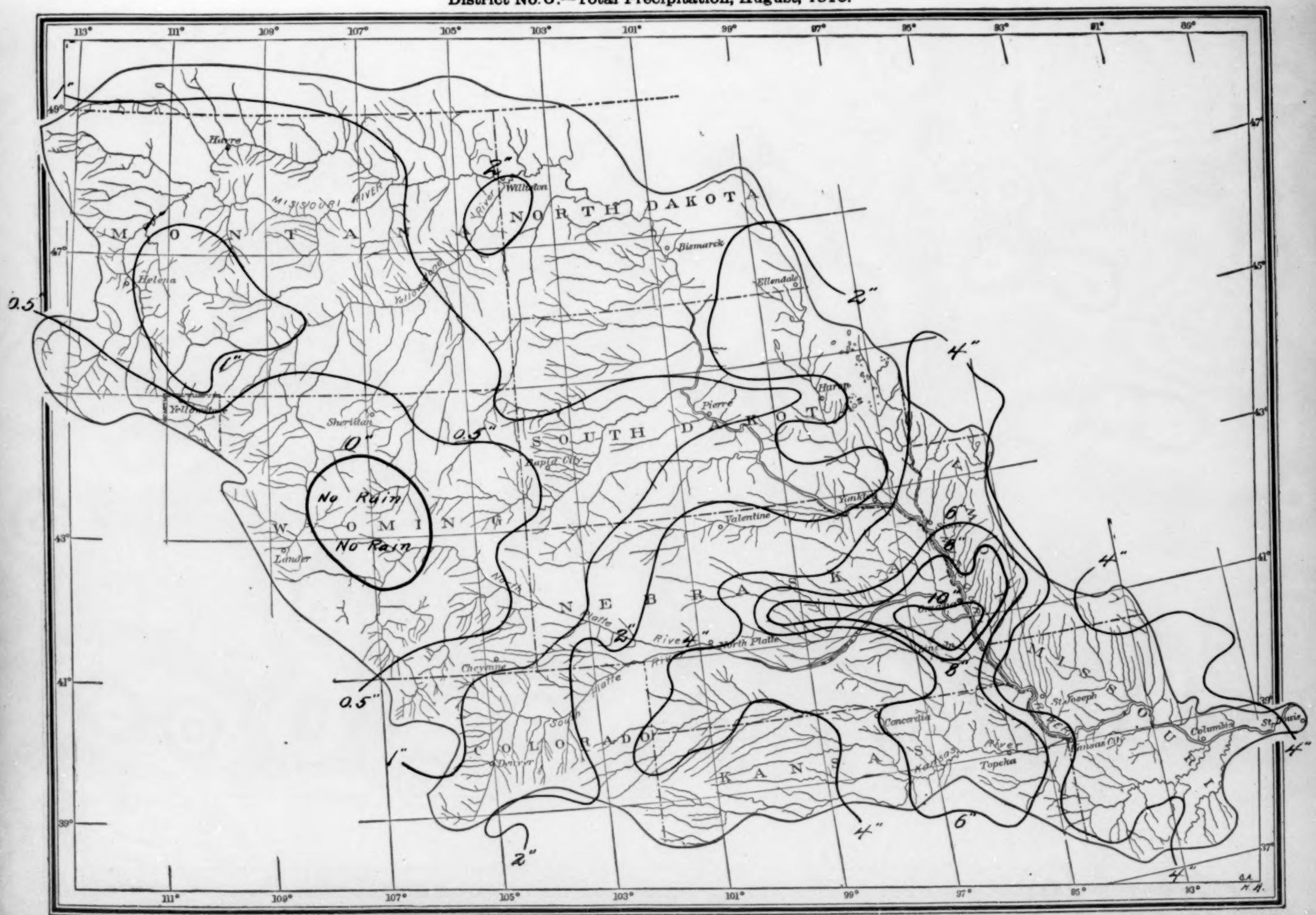
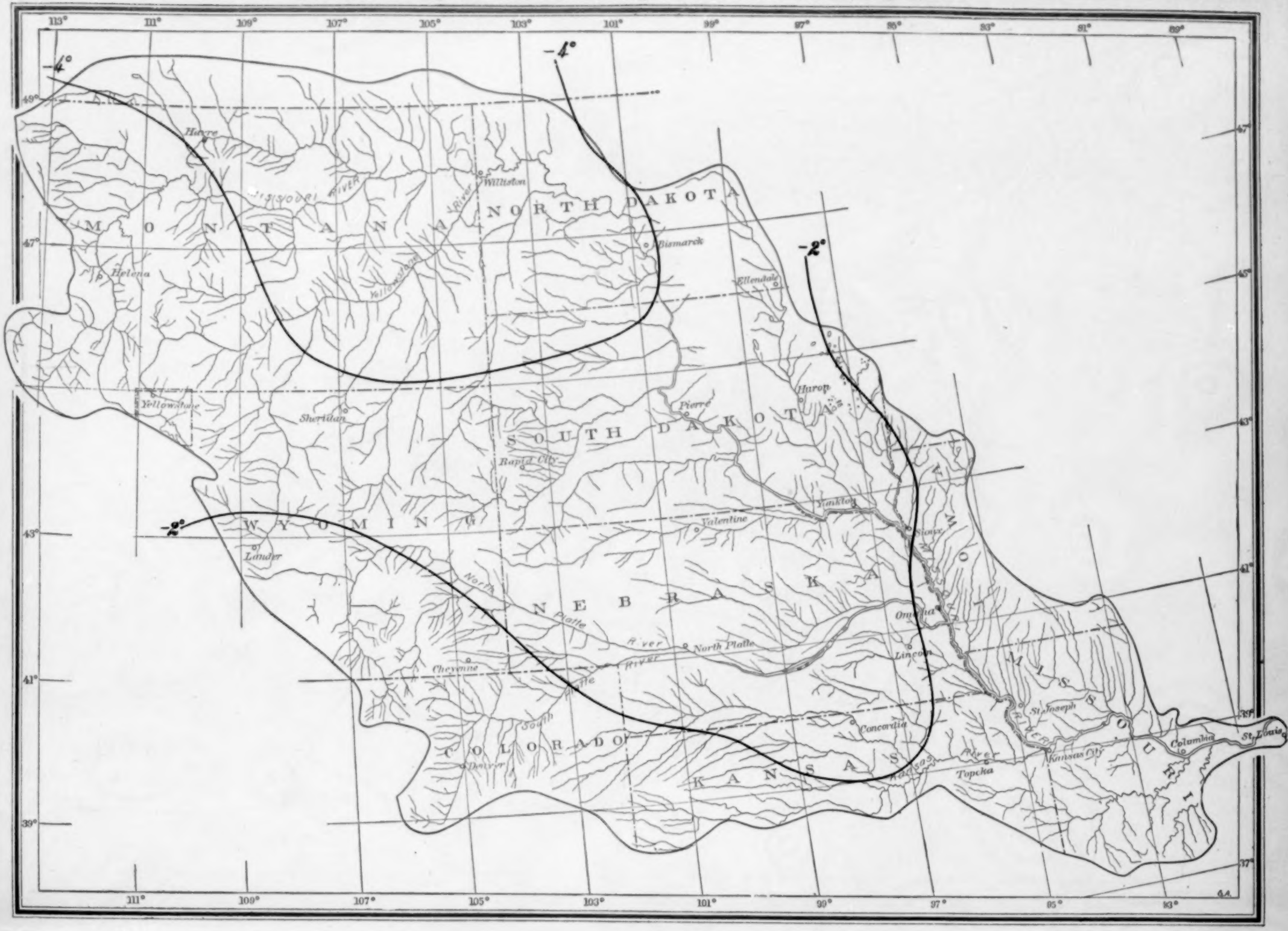


District No. 6.—Departure of the Mean Temperature from the Normal, August, 1910.



District No. 7.—Total Precipitation, August, 1910.

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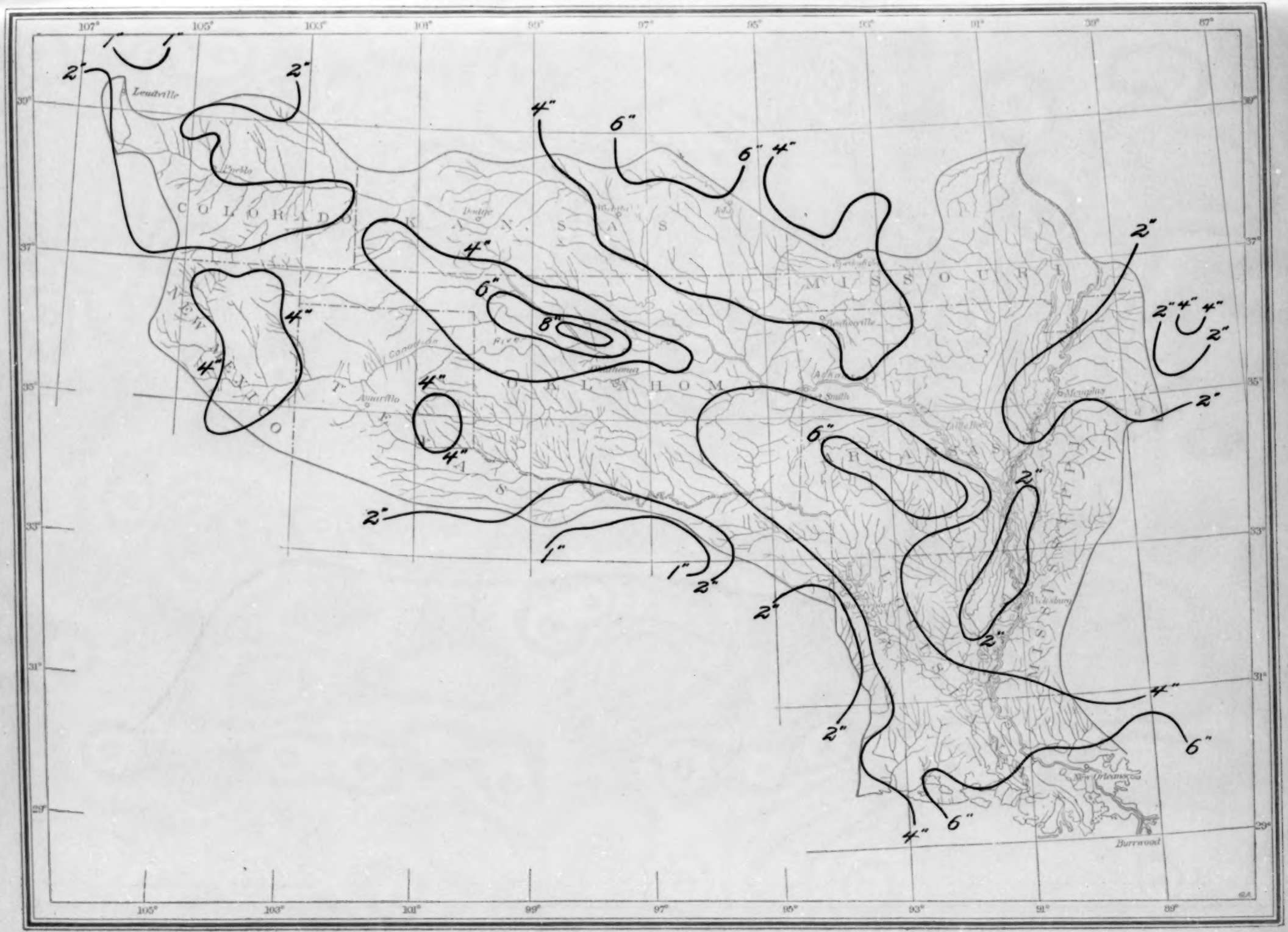
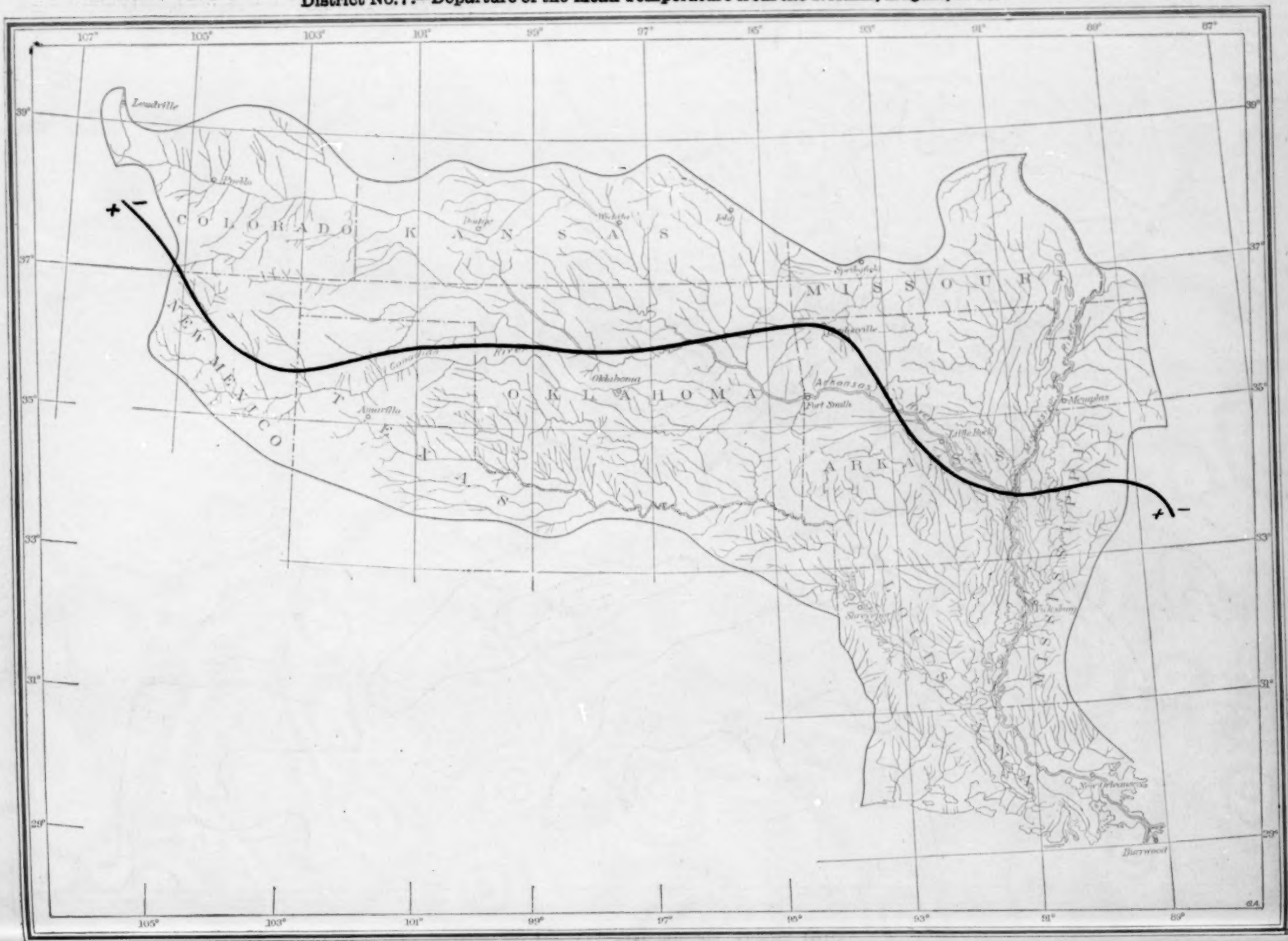
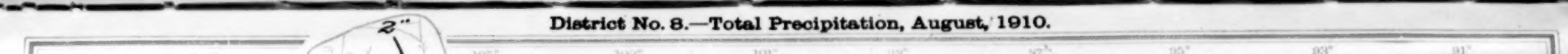


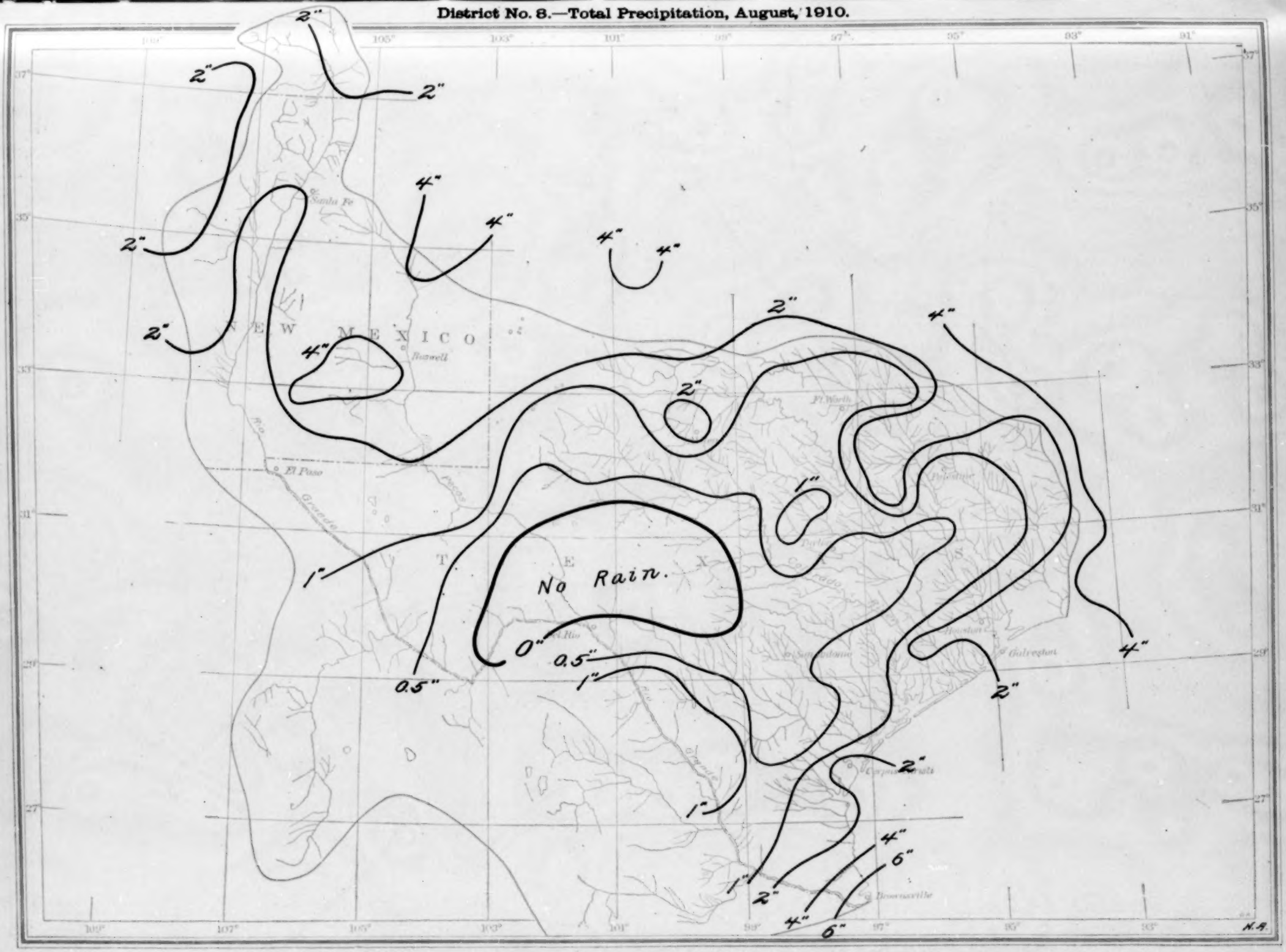
District No.7.—Departure of the Mean Temperature from the Normal, August, 1910.



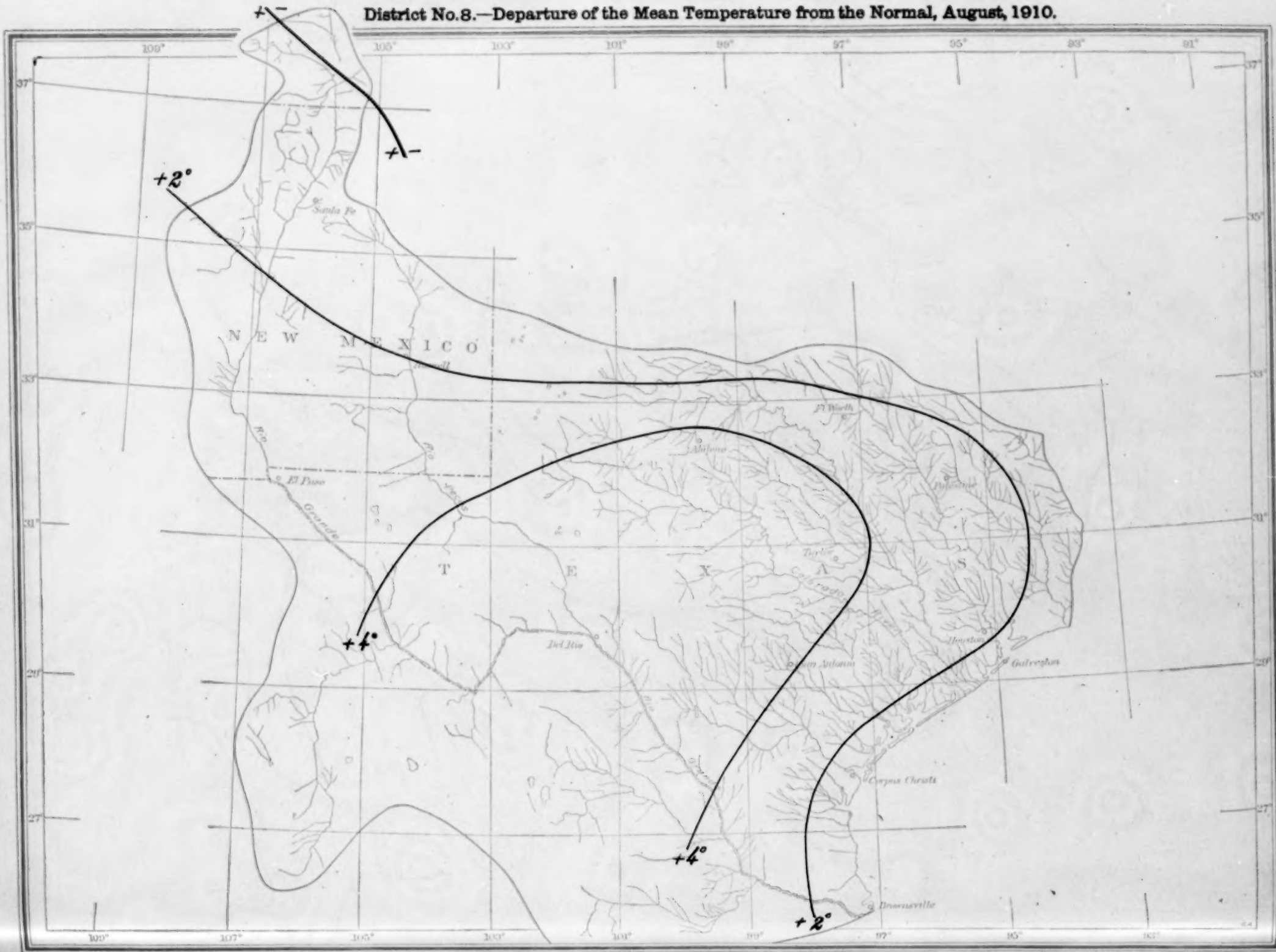
District No. 8.—Total Precipitation, August, 1910.



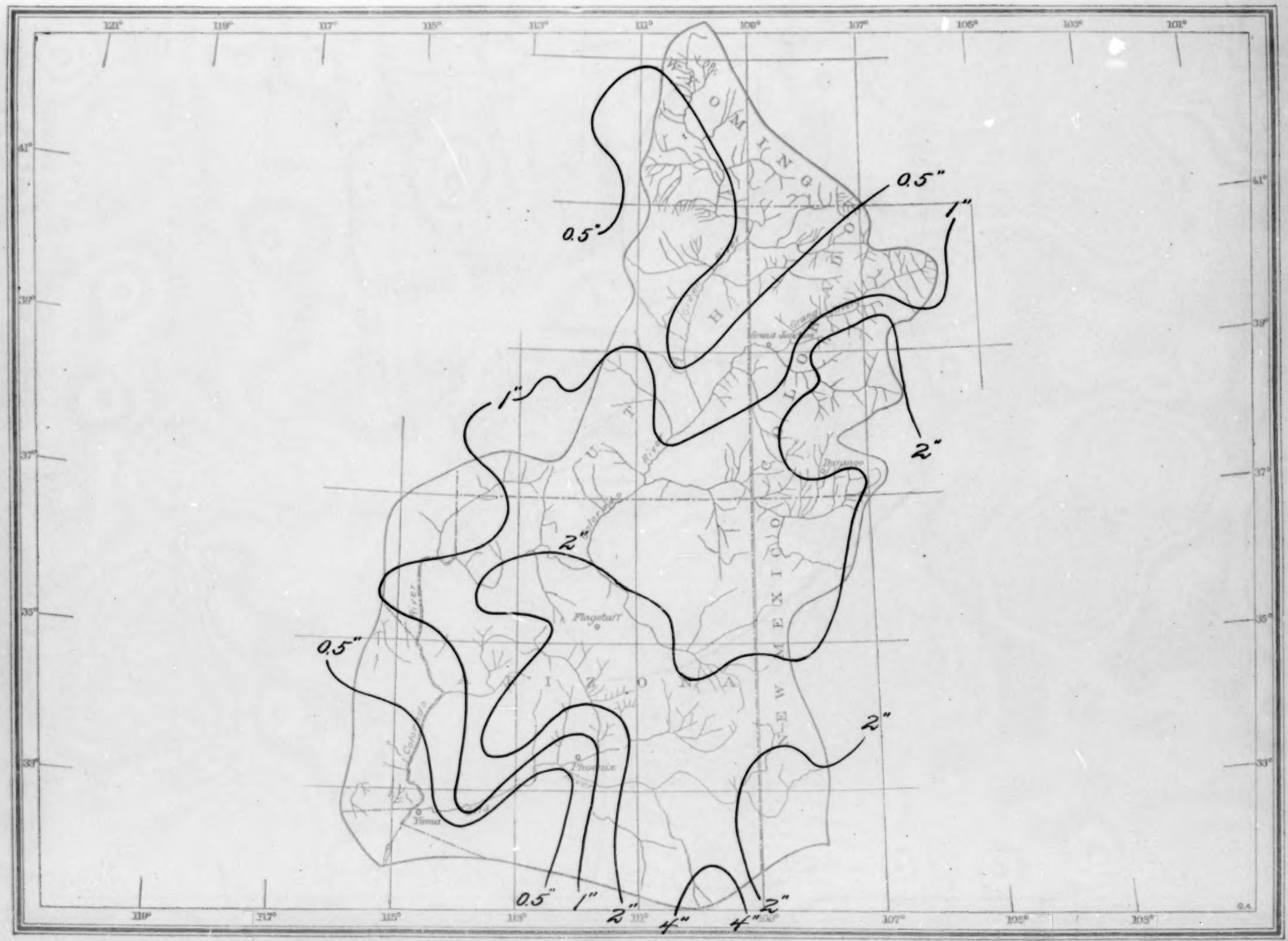
District No. 8.—Total Precipitation, August, 1910.



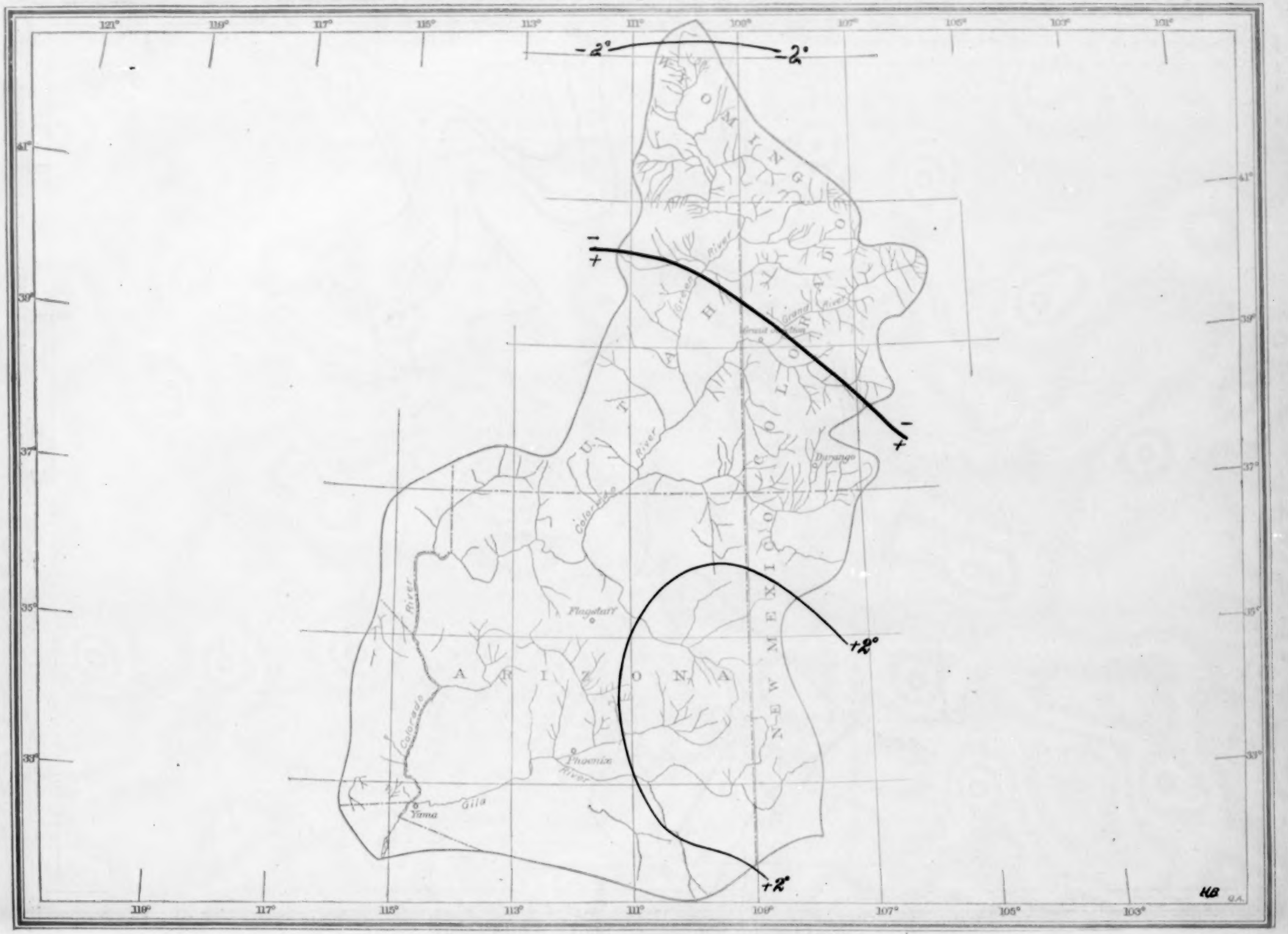
District No. 8.—Departure of the Mean Temperature from the Normal, August, 1910.



District No. 9.—Total Precipitation, August, 1910.



District No.9.—Departure of the Mean Temperature from the Normal, August, 1910.



District No.10.—Total Precipitation, August, 1910.

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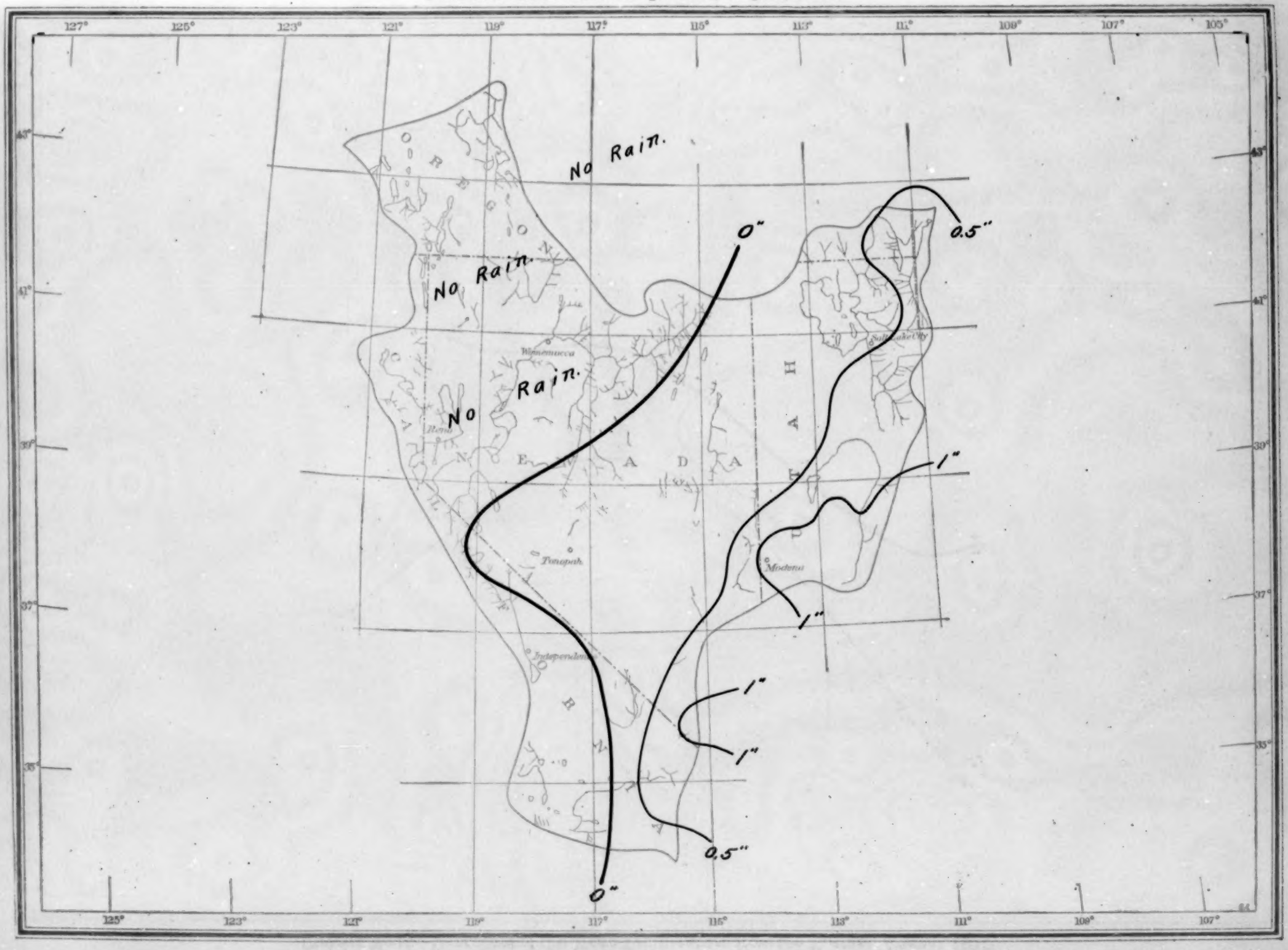
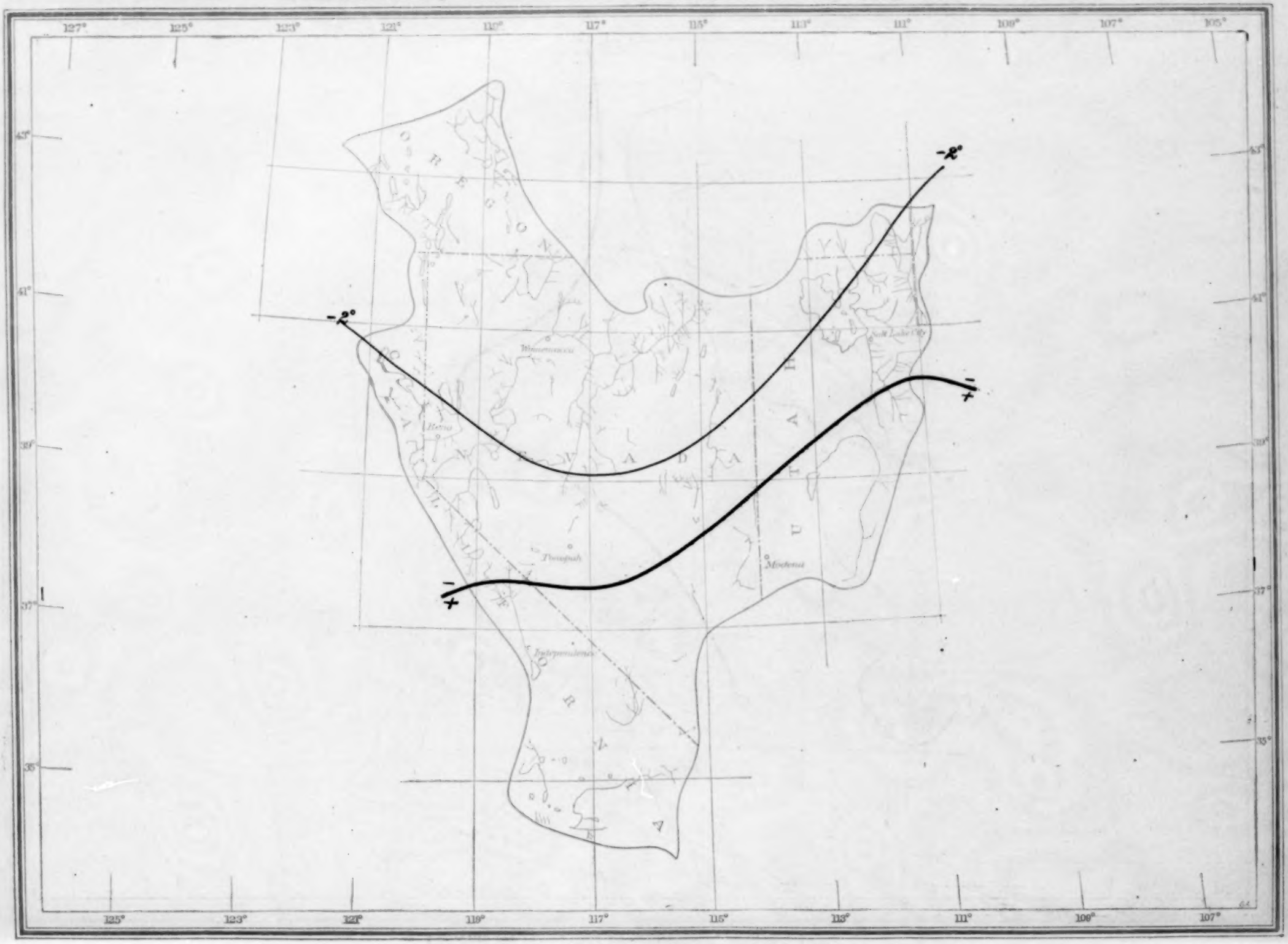


District No.10.—Departure of the Mean Temperature from the Normal, August, 1910.



District No.11.—Total Precipitation, August, 1910.

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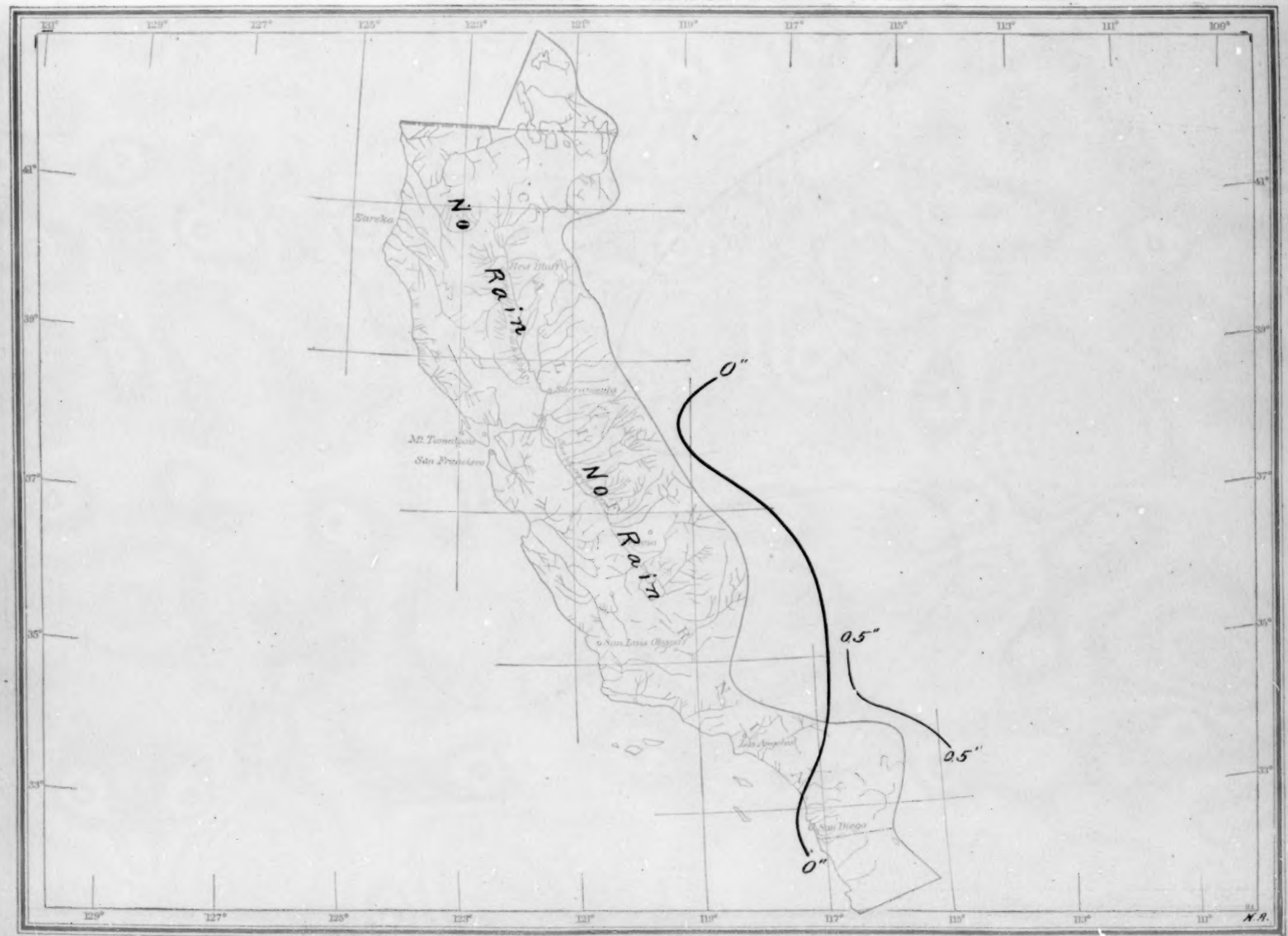

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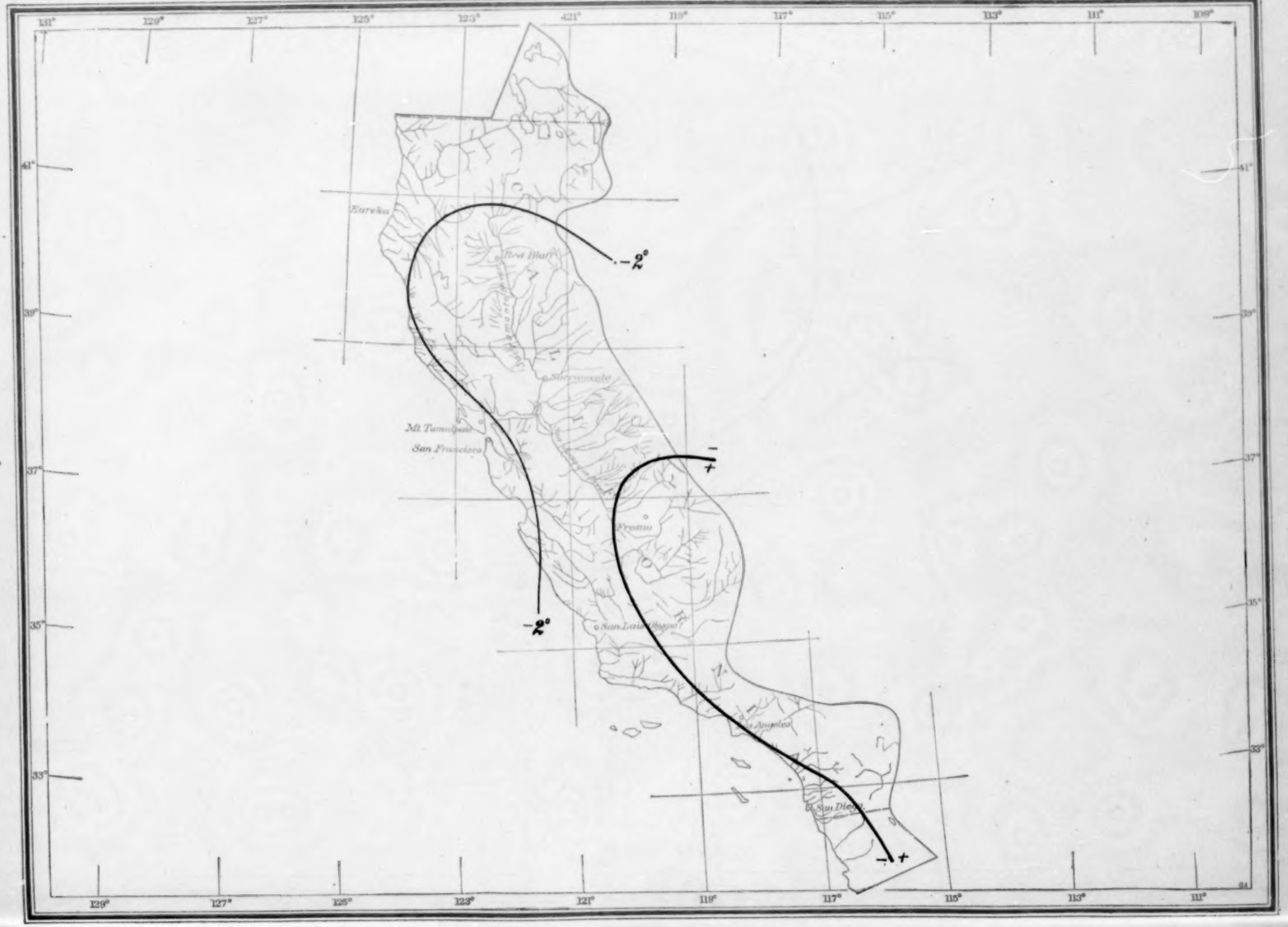
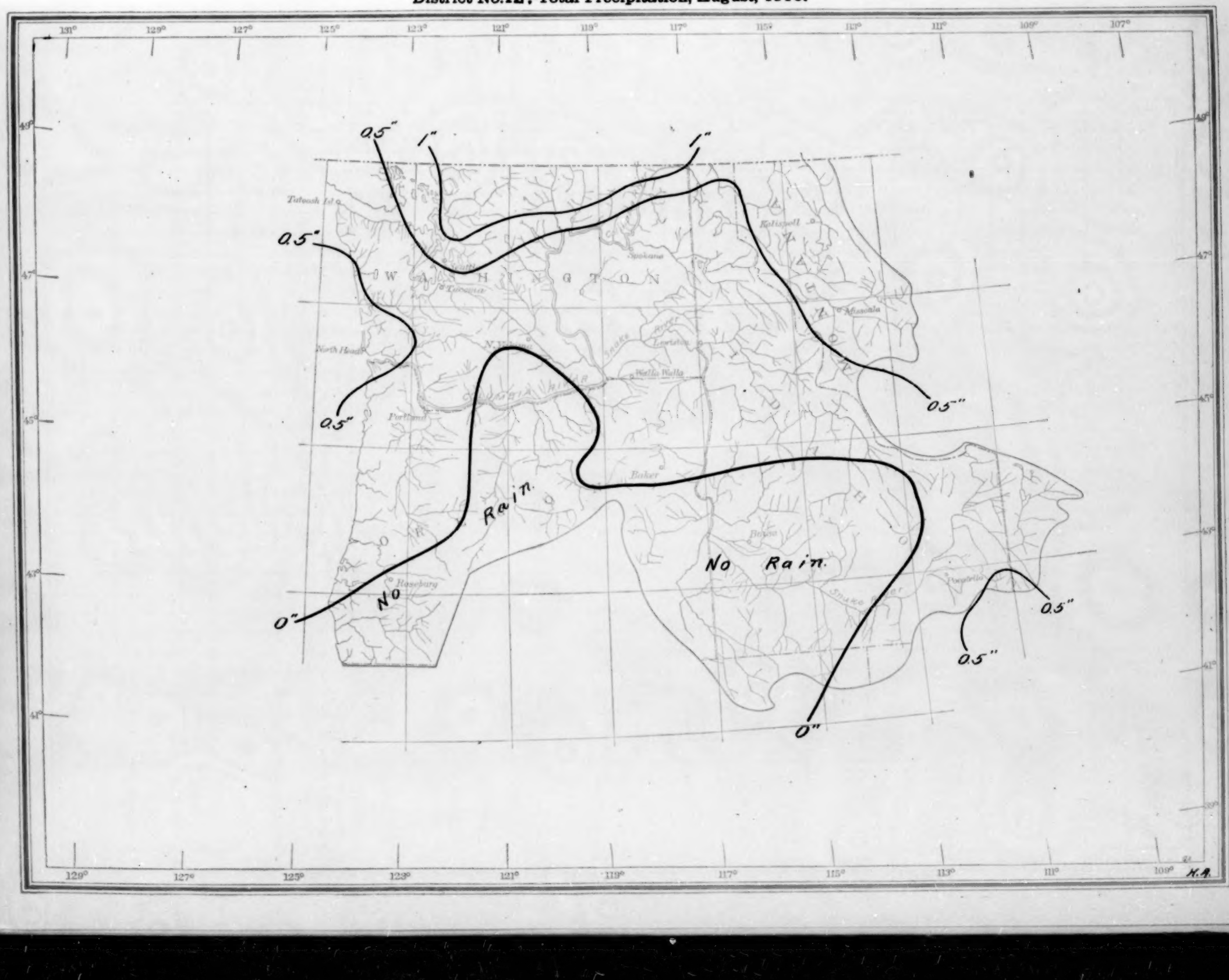


District No. 12.—Total Precipitation, August, 1910.



District No. 12.—Departure of the Mean Temperature from the Normal, August, 1910.

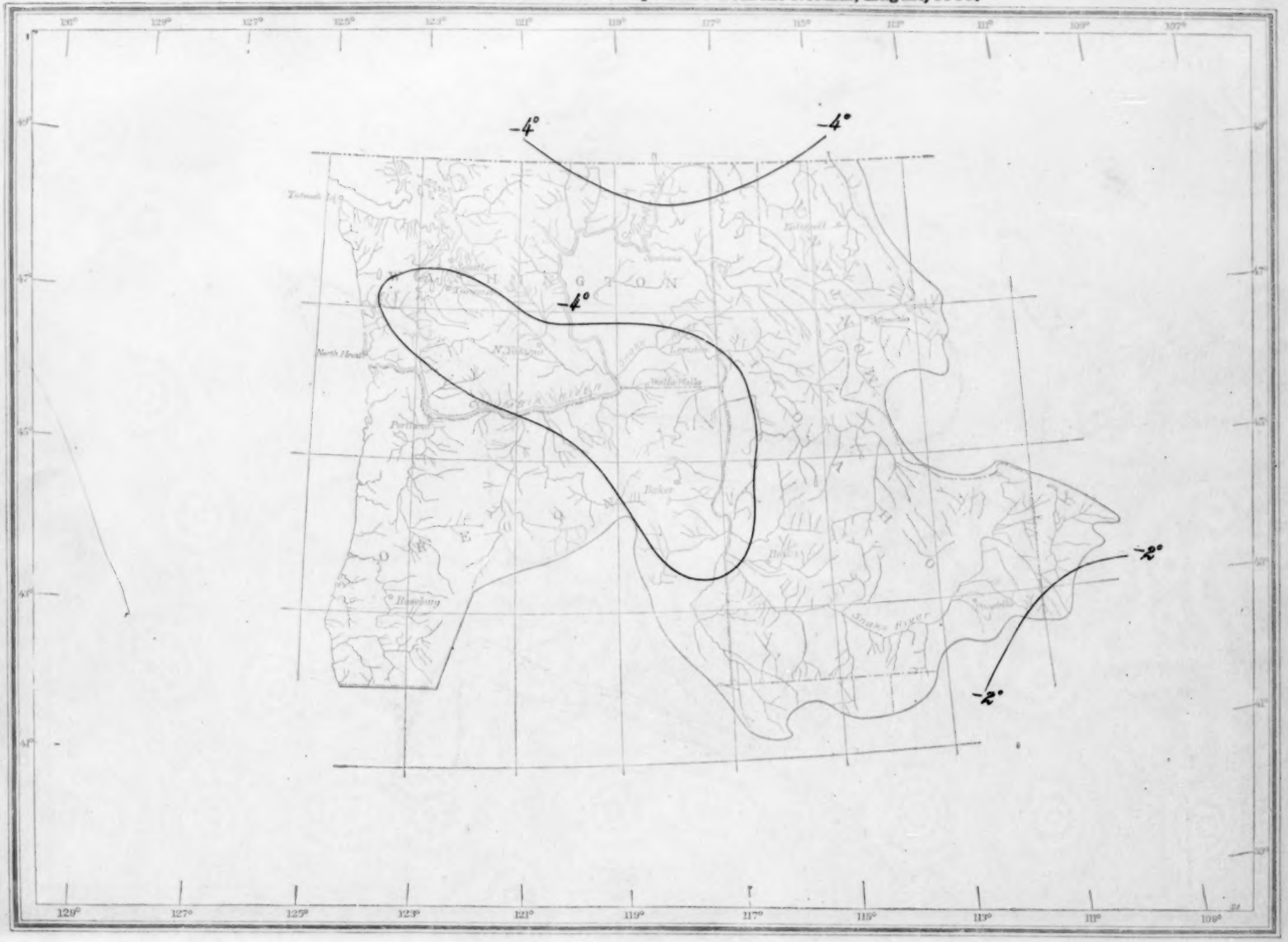

-4°
-4°
-4°
-2°
-2°
Baker
Snake River
Roseburg
Portland
North Head
Tatoosh I.
Walla Walla
Lewiston
Yakima
Spokane
Kalispell
Missoula
Helena
Butte
Boise
Pendleton
The Dalles
Astoria
Olympia
Seattle
Tacoma
Wenatchee
Ellensburg
Port Angeles
Bellingham
Grays Harbor
Willapa Harbor
Columbia R.
Snake R.
Yellowstone R.
Flathead L.
Pend Oreille L.
Coeur d'Alene L.
Priest L.
Kootenai R.
Clark Fork
Bitter Root Mts.
Cascade Mts.
Blue Mts.
Rocky Mts.
Coast Range
Olympic Mts.
Salmon R. Mts.
Lewis Range
Belt Mts.
Big Horn Mts.
Wind River Mts.
Uinta Mts.
Wasatch Mts.
Sawtooth Mts.
Bitter Root Range
Salmon River

Chart I. Hydrographs of Several Principal Rivers, August, 1910.

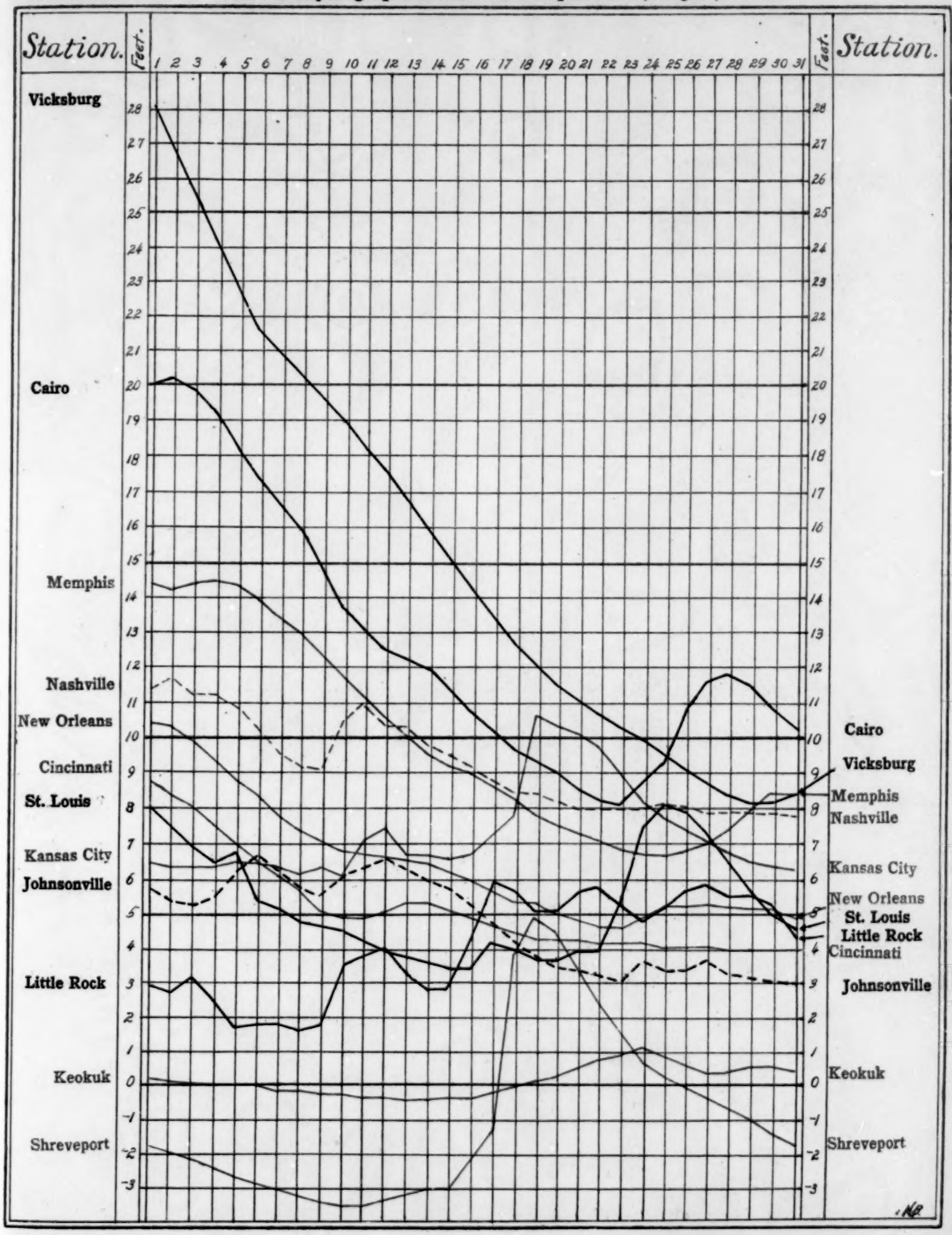


Chart II. Tracks of Centers of High Areas, August, 1910.

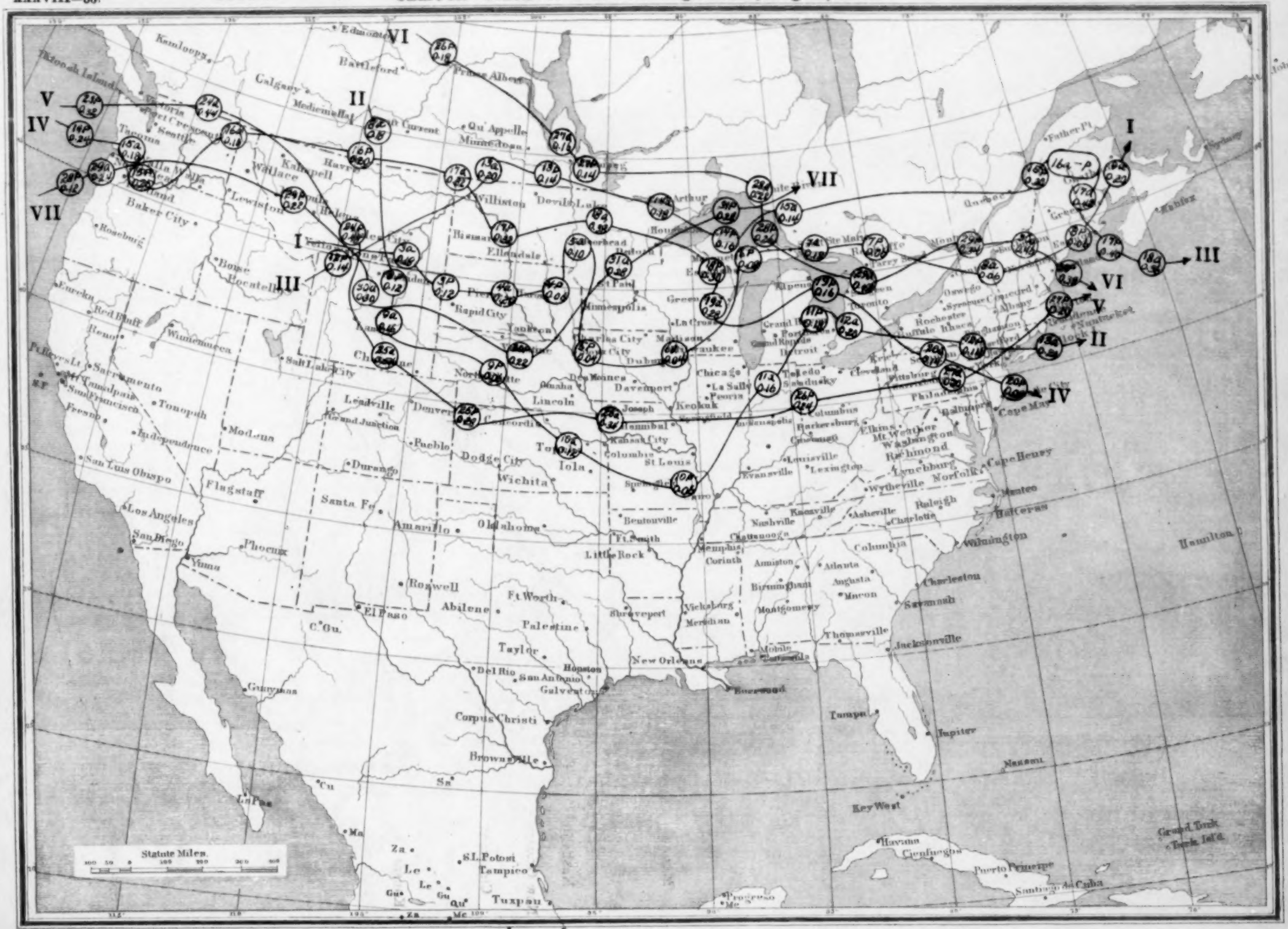
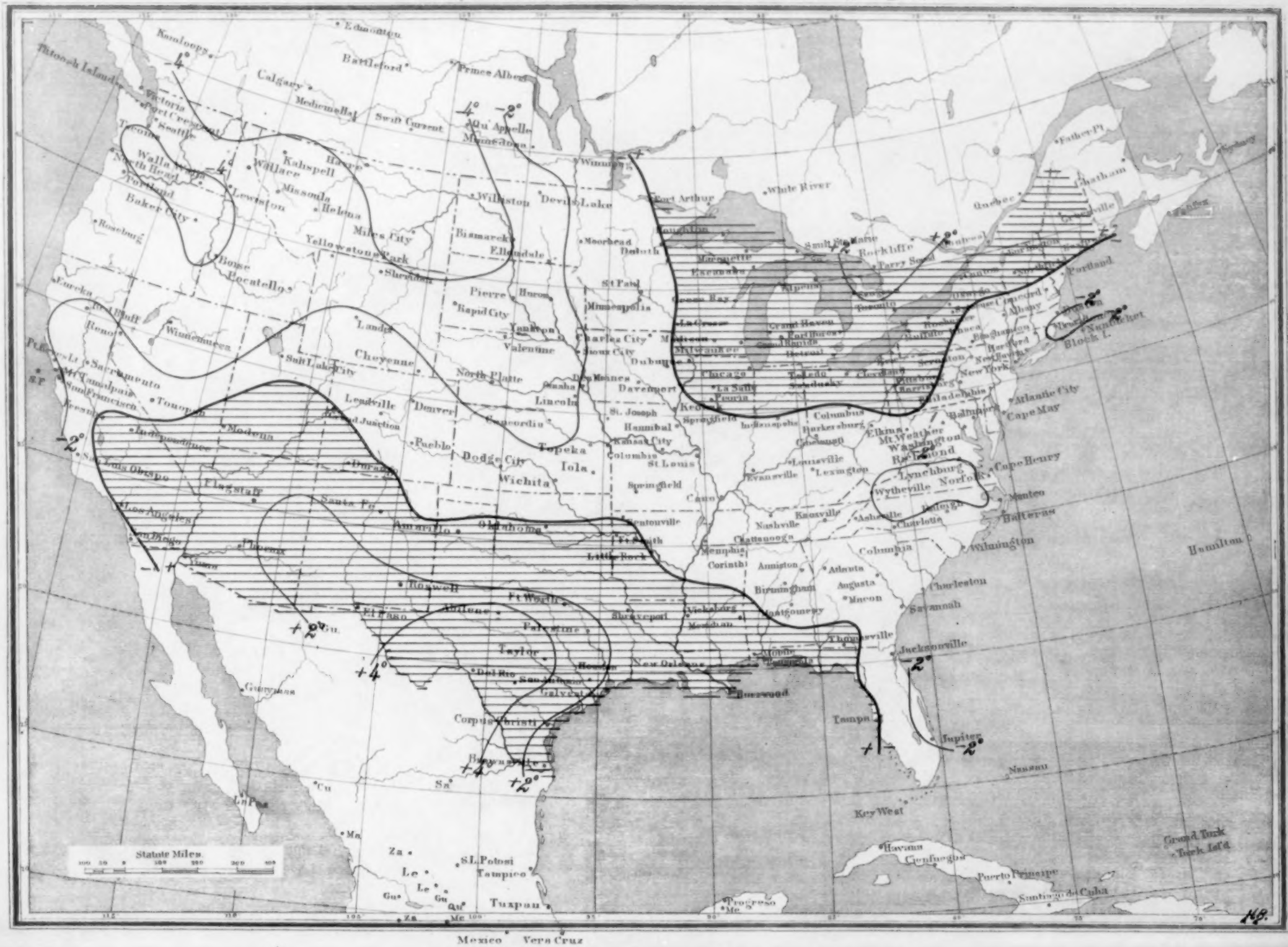


Chart III. Tracks of Centers of Low Areas, August, 1910.

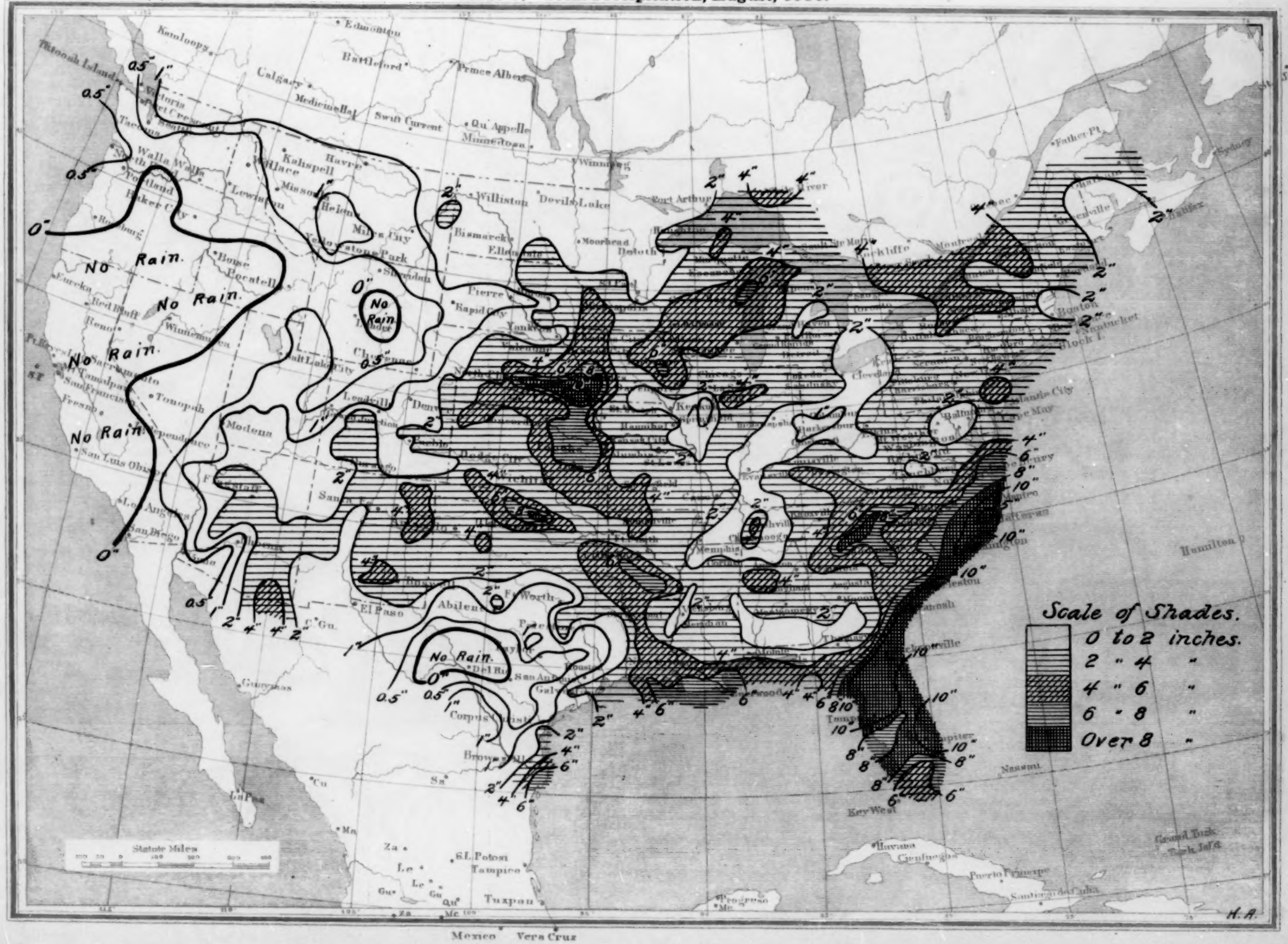
Chart III. Tracks of Centers of Low Areas, August, 1910.

•Barkerville **Chart IV. Departure of the Mean Temperature from the Normal, August, 1910.**

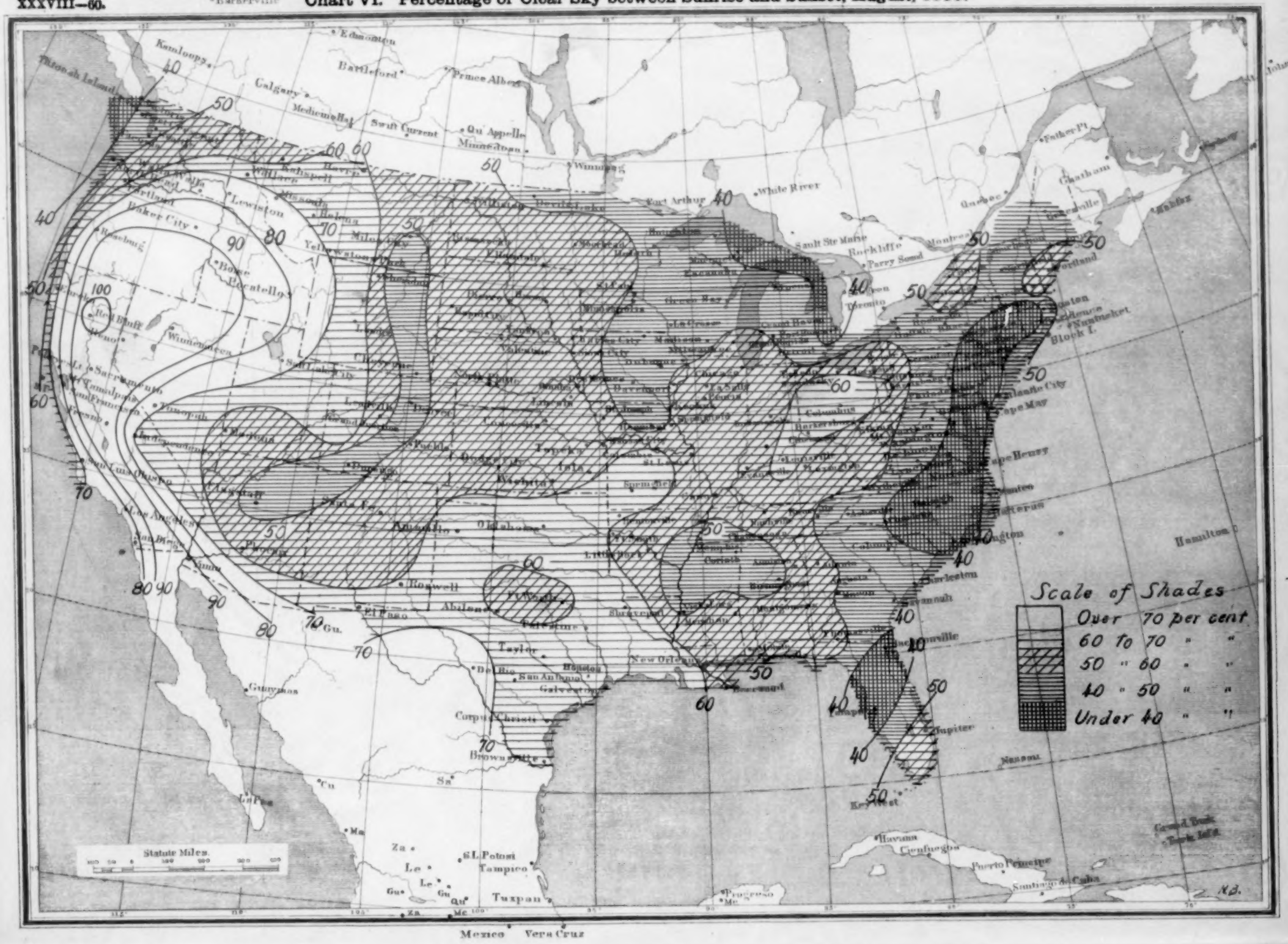


•Barkerville **Chart V. Total Precipitation, August, 1910.**

Chart V. Total Precipitation, August, 1910.



XXXVIII—60. *Barkerville **Chart VI. Percentage of Clear Sky between Sunrise and Sunset, August, 1910.**



XXXVIII—61. *Barkerville **Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, August, 1910.**

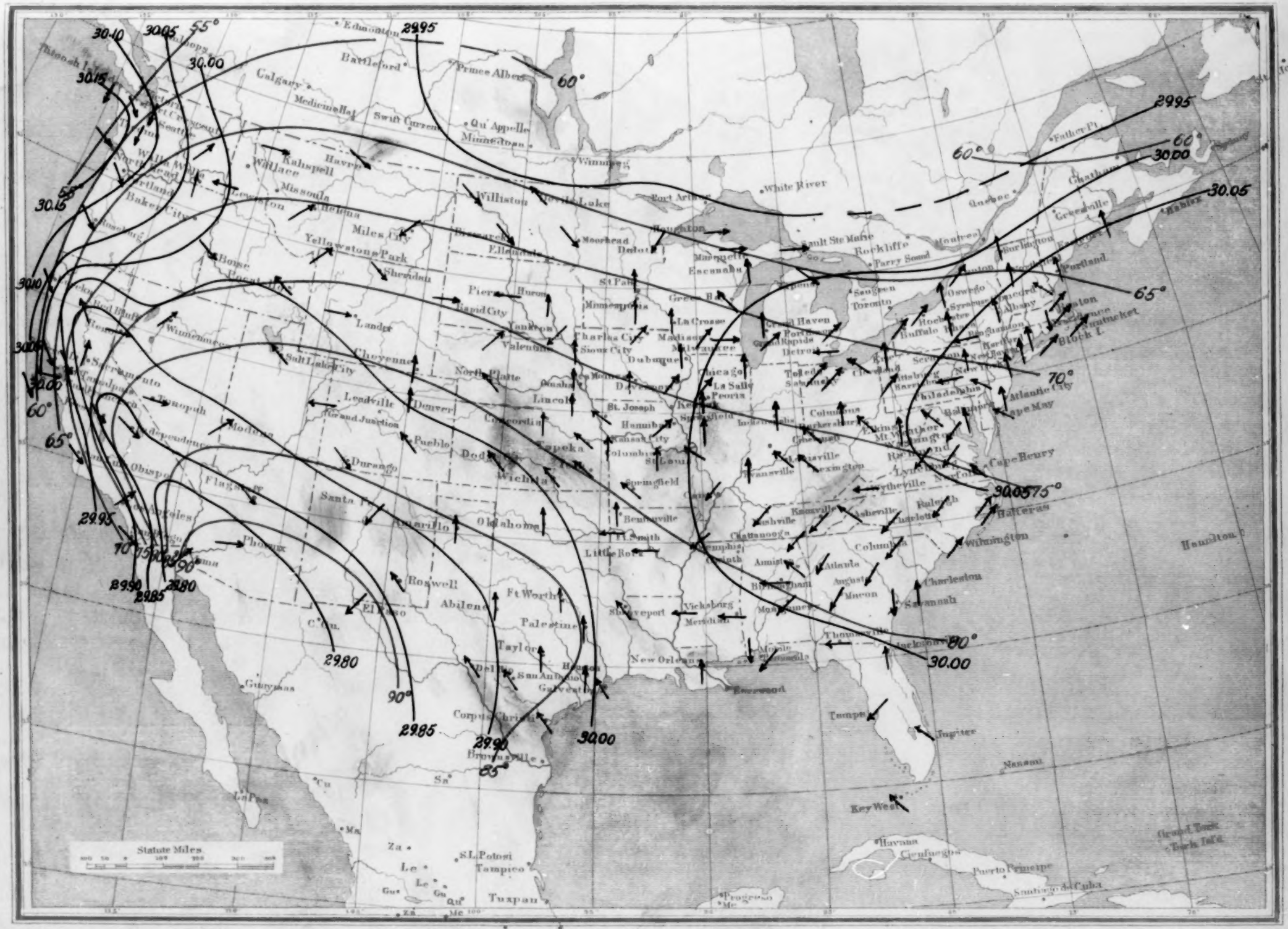



Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, August, 1910.